

**LPC 0310450012--Cook County
Chicago Heights / Alco Springs Industries Inc
ILD 048300412
SF/HRS**

CERCLA

Site Reassessment



**Prepared by:
Office of Site Evaluation
Division of Remediation Management
Bureau of Land**

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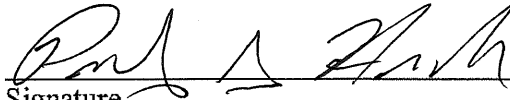
Title: CERCLA Site Reassessment for ALCO Springs Industries Inc.

Preparer: James M. Salch, EPS III, Office of Site Evaluation, Illinois Environmental Protection Agency


Signature

5/19/15
Date

Approval: Patrick Hamblin, Acting Chief, United States Environmental Protection Agency, Region 5


Signature

5/19/15
Date

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**CERCLA
SITE REASSESSMENT**

for:

**ALCO SPRINGS INDUSTRIES INC.
CHICAGO HEIGHTS, ILLINOIS
ILD 048300412
LPC# 0310450012**

**PREPARED BY:
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF LAND
DIVISION OF REMEDIATION MANAGEMENT
OFFICE OF SITE EVALUATION**

January 9, 2015

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Section 1.0 Introduction

On February 26, 2013, the Illinois Environmental Protection Agency's (Illinois EPA) Office of Site Evaluation (OSE) was tasked by the United States Environmental Protection Agency (U.S. EPA) Region V to conduct a Site Reassessment (SR) at the ALCO Springs Industries Inc. (ALCO) site in Chicago Heights, Cook County, Illinois. The ALCO site is located at 2300 Euclid Avenue in Chicago Heights. ALCO is an active manufacturer of steel springs for heavy machinery. The site occupies approximately 20 acres and can be found within the Northwest ¼ of Section 29, Township 43 North, Range 7 East of the Third Principle Meridian. The latitude and longitude for a centrally located position at the subject property is 41°29'39.865"N and longitude 87°38'57.406"W.

The SR is performed under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) commonly known as Superfund. Current U.S. EPA policy stipulates that a SR be conducted to determine the current status of the ALCO site. The SR will consist of an evaluation of recent information to determine if further Superfund investigations are warranted. The SR will supplement previous work, and is not intended to replace previous CERCLA assessments.

The SR is designed to evaluate recent information that will help determine if the site qualifies for possible inclusion on the National Priorities List (NPL), or should receive a No Further Remedial Action Planned (NFRAP) designation. At the conclusion of the reassessment process, Illinois EPA will recommend that the site be given a NFRAP designation, receive further Superfund investigation, or be referred to another state or federal cleanup program.

The ALCO site was initially placed on the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database on January 28, 1986. Illinois EPA completed a Preliminary Assessment (PA) in April 1986. The ALCO site was given a medium priority and was recommended for a Site Inspection due to potential impacts to Thorn Creek from on-site landfilling of quench oil and quench oil bath sludge. A Site Inspection was completed in June 1987 by Ecology and Environment, Inc. Three offsite potable wells were sampled and the site was given a higher priority. A Focused Site Inspection Prioritization (FSIP) was completed in September 1995 by Black & Veatch Waste Science, Inc. Groundwater,

potable water, soil and sediment samples were collected as part of the FSIP and the site was again given a higher priority status. The Illinois EPA completed a Site Team Evaluation Prioritization (STEP) report on September 30, 1996. Seven sediment samples were collected along the surface water exposure pathway in December 1995 as part of the STEP. Only two pesticides were detected at concentrations significantly above background. In December 2008, the site was enrolled in the Illinois EPA's Site Remediation Program (SRP). A Comprehensive No Further Remediation Letter (NFR Letter) was issued by the Illinois EPA on April 4, 2012.

The SR Report will describe current site conditions and illustrate how the site has changed since the completion of the last CERCLA investigation in 1996. This report will contain a summary of existing information that will include site history, current site conditions, evaluate past analytical data, and evaluate past remedial activities. The SR will also support emergency response or time-critical removal activities if they are warranted.

Section 2.0 Site Description and History

Section 2.1 Site Description

The ALCO site is located at 2300 Euclid Avenue in Chicago Heights (Figure -1). The subject property occupies approximately 20-acres and can be found within the Northwest ¼ of Section 29, Township 43 North, Range 7 East of the Third Principle Meridian. The latitude and longitude for a centrally located position for the subject property is 41°29'39.865"N and longitude 87°38'57.406"W. The subject property is located in an area with a mixture of property use that consists of industrial / commercial properties, residential properties, and recreational properties in Chicago Heights. Residential properties exist on the eastern side of Euclid Avenue and a quarter mile west of the property beyond the Sauk Trail Forest Preserve. The Sauk Trail Forest Preserve exists to the north, south, and west of the property (Figure-2). Esmark Steel Group (formerly Sun Steel), a steel converting factory, shares the southern property boundary with ALCO. Euclid Avenue forms the eastern property boundary and a Canadian National Railroad right-of-way shares the northern property boundary. The Sauk Trial Forest Preserve shares the western property boundary. Access to most of the operational portion of the property is restricted by a metal fence. Access to the western wooded portion of the property can be

gained from the Sauk Trail Forest Preserve and the adjacent railroad tracks which form the northern property boundary.

The subject property includes an operational area consisting of a main building, several small out buildings, an asphalt parking lot, a water tower and associated well and pump house, an access road, and a grass covered former parking lot area (ENVIRON, May 2009). This portion of the site is relatively flat. The remainder of the property west of the main building and east of Thorn Creek consists of a former unpermitted onsite landfill (described in more detail in Section 2.2) and wooded area which slopes steeply to the west (approximately 37-feet) down to flat marshy wetland areas (Figure – 5). The area between the base of the landfill and Thorn Creek is classified by the U.S. Fish & Wildlife Service's National Wetlands Inventory as a Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded wetland (U.S. Fish & Wildlife Service, National Wetland Inventory).

The OSE conducted a site reconnaissance of the subject property on March 26, 2014 as part of the SR. Since ALCO Spring Industries Incorporated received a NFR Letter from the Illinois EPA in April 2012, the focus of the site reconnaissance was on the former landfilled area and potential impacts to Thorn Creek. An old access road is present on the southern side of the landfill that leads down the slope to the flat wetland area. Remnants of a former oil water separating system used to separate oil from process water are located in the flat area west of the landfill. An old concrete drainage tile located on top of the ground surface leads to an earthen diked surface impoundment. Some standing water and vegetation is present within the diked area. From the surface impoundment, process water was discharged to the drainage ditch eventually reaching Thorn Creek.

Runoff from the subject property and the Esmark Steel Group property is to the west towards Thorn Creek. A 48-inch drainage pipe was noted to discharge to a drainage ditch in a 1980 Illinois EPA inspection report (Illinois EPA, BOL File). A 48-inch concrete drainage pipe was observed during the site reconnaissance at the head of a valley located between ALCO and Esmark Steel Group (Appendix – C). The origin of water discharging from the drainage pipe is unknown since ALCO representatives indicate they are currently not connected to the drainage pipe. An oil release was observed at the 48-inch drainage pipe in 2005. Although remediated, absorbent socks and remnants of the diking system still remain in the drainage ditch near the

discharge point of the drainage tile (Appendix – C). Drainage from the 48-inch concrete drainage pipe and runoff from the western portion of ALCO and Esmark Steel Group properties flows down the valley and through the lower lying wetland areas eventually discharging to Thorn Creek. Thorn Creek flows north / northeast across the Sauk Trial Forest Preserve, passes under the railroad right of way, and continues to the north/northwest for 11 miles before reaching the Little Calumet River (Figures -2 & 3). The Little Calumet River is listed by the Illinois Department of Natural Resources as a fishery (IDNR, May 1996). Approximately 17-miles of Palustrine forested wetlands exist in the 15-mile surface water target distance limit (Illinois EPA, BOL File).

During the 2014 site reconnaissance, exposed landfilled material was observed on the face and toe of the landfill, and in low lying areas beyond the extent of the landfill (Appendix – C). Erosional channels were cut into the landfilled material on the west side of the landfill exposing waste material. Portions of the slope appeared unstable and subject to failure. Runoff from the landfill and exposed material passes directly to the low lying wetland areas and Thorn Creek. Large blocks of slag material are exposed on the steep south and southwest facing slopes of the landfill and in low lying areas adjacent to the slope of the landfill (Appendix – C). This material is present directly above the drainage ditch that leads to Thorn Creek. Smaller boulder sized pieces and granular sized pieces of slag are present at the surface throughout the south and west facing slopes of the landfill. Smaller pieces of slag were observed in the lower lying areas adjacent to the former landfill and are present within the drainage ditch and areas of standing water. Analytical samples of the slag material contained elevated concentrations of chromium, manganese and iron. Pieces of exposed scrap metal were also present at various locations throughout the landfilled area.

Potential sources of contamination include the on-site unpermitted landfill and exposed waste, former Underground Storage Tanks (USTs), a former oil water separator, former quench oil tanks, a 2005 oil release from the 48-inch concrete drainage pipe, and additional areas of concern identified in correspondence with the Illinois EPA's SRP.

The geology at the subject property varies from the operational portion of the property to the low lying wooded area on the west side of the property. Subsurface materials on the operational portion of the property consist of less than 10-feet of fill material, underlain by roughly 70 feet of

glacial till (Tinley Till Member), underlain by Silurian-age dolomite (Niagaran Series) (ENVIRON, May 2009). Unconsolidated deposits on the low lying areas on the western portion of the property consist of alluvium sands and silts associated with the Thorn Creek flood plain.

Illinois EPA SRP reports indicate shallow groundwater in the unconsolidated material at the subject property is between 2.5 feet in the low lying flood plain area and 28 feet in the higher elevation areas. The groundwater flow direction is generally westward based upon onsite monitoring wells. The City of Chicago Heights currently has an ordinance prohibiting the installation or use of private water supply wells within the city limits. According to the City of Chicago Heights water department, no active potable water supply wells are located within the City limits (ENVIRON, May 2009). Potable water is provided to residents and businesses by the City. The municipal water supply is obtained from Lake Michigan via Hammond, Indiana.

Three rounds of groundwater samples were collected from four on-site monitoring wells in 2009 during the site's enrollment in the Illinois EPA's SRP. During the initial sampling event, arsenic, iron, manganese, chromium and lead were detected above Class I groundwater Remediation Objectives (ROs). In the subsequent sampling events only iron, arsenic and manganese were detected above Class I groundwater ROs. Analytical groundwater models provided in Illinois EPA's 35 Ill. Adm. Code Part 742, Tiered Approach to Corrective Action Objectives (TACO) were used to calculate the downgradient point of compliance for iron, arsenic and manganese in groundwater. Iron, arsenic and manganese were modeled to exceed Class I groundwater ROs at the western property boundary; however, concentrations above Class I groundwater ROs were predicted to remain within the area covered by the Chicago Heights groundwater ordinance (ENVIRON, May 2009). Pursuant to TACO Section 742.1015, if a groundwater use ordinance is being used to exclude the groundwater ingestion exposure route, and contaminants of concern are demonstrated to migrate beyond the property boundary of the remedial applicant above approved ROs, a notification as such must be provided to the municipality and the effected property owner(s).

ALCO currently utilizes an industrial well installed in the Silurian bedrock formation at a depth of 248 feet. This well is not used as a potable water supply well. Based on data obtained from the Source Water Assessment Program (SWAP) ArcIMS Mapping Tool, 32 community water supply wells, 24 non-community water supply wells, and 1018 private water supply wells are

located within the 4-mile target distance limit (TDL) of the subject property (Illinois EPA, SWAP)(Figure - 4). The nearest community water supply well is a backup well for South Chicago Heights located approximately 0.7 miles southeast of the subject property. According to the SWAP data base, several Sauk Trail Forest Preserve potable wells are located within a half a mile south of the property. These wells are beyond the City Limits and groundwater modeling demonstrates that the inorganic compounds of concern do not exceed applicable remediation objectives beyond the limits of the groundwater ordinance. Since groundwater contamination associated with the ALCO site was not projected to impact water supply wells located outside the Chicago Heights groundwater ordinance limits, no action was required.

It should be noted that information used to compile the database for the SWAP Mapping Tool is comprised from historical well drilling installation logs provided to the Illinois State Geological Survey (ISGS) and the Illinois State Water Survey (ISWS) and may not reflect the current status of private and non-community water supply wells. Wells no longer in service may be included in the database.

Approximately 185,637 people are located within 4-miles of the subject property. No residences, schools, or day care centers are located on the area of observed contamination. Populations within the target distance limits are summarized below.

Population Within 4-Miles of the Site

0 - 1/4 Mile	1,707
1/4 – 1/2 Mile	5,054
1/2 - 1 Mile	15,222
1 – 2 Miles	35,897
2 – 3 Miles	47,816
3 – 4 Miles	79,941

Section 2.2 Site History

Building construction reportedly began at the subject property in 1913. The original facility was known as the Inter-Ocean Works of Railway Spring Company which later became part of The American Locomotive Company (ALCO) Spring Division, and then ALCO Products, Inc. (ENVIRON, May 2009). The original steel foundry and spring complex encompassed 42 acres and included the neighboring Esmark Steel Group property (formerly Sun Steel).

Approximately 20 acres were sold to Sun Steel in 1972. ALCO has owned and operated the subject property since the 1940s for the manufacturing of steel springs. Steel bar stock is cut to size, heated, and then coiled to form the spring. Once formed, the springs are submerged in a quench oil bath then hardened in a draw furnace. The springs then go through a finishing process that may include painting with water-based coatings. The springs are tested then packaged for shipment. Nonhazardous wastes currently generated by the facility include: grinding wastes; floor sweepings; broken wooden pallets; used oil/coolant, filters, and oil-contaminated materials; and steel scale (ENVIRON, May 2009). All nonhazardous wastes are disposed of at appropriate solid waste disposal or recycling facilities. The facility is currently listed as a Conditionally Exempt Small Quantity Generator.

Prior to the installation of a quench oil reclamation system in 1980, quench oil was cooled using a water recirculation system. Excess cooling water was discharged to a partially buried concrete oil-water separator located near the western property boundary via an aboveground concrete pipeline. Oil present in the cooling water was skimmed from the surface of the separator and the remaining water was discharged to Thorn Creek. It is unknown whether or not this was a permitted discharge. The final disposition of oil skimmed from the oil-water separator is uncertain.

Former tanks located at the facility included five underground storage tanks (USTs) and four former underground quench oil tanks constructed of single-wall welded plates. Four of the USTs totaling 17,000 gallons contained fuel oil for the facilities production furnaces. The remaining UST was a 1,000 gallon gasoline tank. All of the USTs were reportedly removed in 1997. The four former quench oil tanks were reportedly backfilled and are no longer used.

Until the early 1980s, wastes including grinding wastes, steel scale, scrap steel, general plant refuse, cinders, soil, bricks and concrete debris were disposed of on the west side of the property where the surface slopes down to Thorn Creek. This unpermitted landfill was estimated to contain approximately 41,667 cubic yards of material with a surface area of 45,000 square feet. A two foot clay soil cap was installed in the early 1980s, and was approved by the Illinois EPA in October 1985. Documentation submitted to the Illinois EPA's SRP in 2009 indicates landfilled materials were exposed in eroded areas of the landfill (ENVIRON, May 2009). Very little cover material appeared to be present on the slopes of the landfill at the time of the March 26, 2014 Illinois EPA site reconnaissance. Larger erosional channels were present on the slopes of the landfill exposing landfilled materials. Varying sizes of slag material are exposed throughout the flanks of the landfill and in lower lying areas beyond the extent of the landfill.

Regulatory involvement at the facility began in November 1980 when Illinois EPA responded to a complaint that the facility was discharging process water into Thorn Creek. An inspection of the facility identified three recognized environmental conditions worthy of concern: 1) Runoff from the landfill was being contained in diked areas close to Thorn Creek; 2) Approximately 100-120 drums of oil and scale were being stored south of the landfill; and 3) A 48-inch sewer was discharging approximately 250 gallons per minute into Thorn Creek. The facility was to arrange for disposal of the drums; however, a subsequent inspection on November 13, 1981, revealed 100 empty drums in the same area as those identified in the November 1980 inspection. The 48-inch sewer line was believed to be connected to Sun Steel; however, no drawings were available that showed the connection. On November 19, 1981, Illinois EPA collected surface water samples from the diked areas and Thorn Creek. Following a Pre-Enforcement Conference in November 1984, a 2-foot clay cap was placed on the landfill. On October 25, 1985, Illinois EPA verified the adequacy of the landfill cap.

During a stormwater inspection of the plant on November 3, 2005, standing oil was observed in the effluent discharge of a 48-inch sewer line located on the southwest portion of the property. An emergency response team was onsite the day of the release and placed absorbent pads and socks to soak up the visually present oil. The Illinois Emergency Management Agency (IEMA) was notified and incident number (H20051497) was issued. A series of dams was created in the ditch that leads to Thorn Creek to collect the quench oil and prevent it from reaching Thorn

Creek. Two vacuum trucks were used to evacuate oil and water from the diked areas. Remedial efforts appear to have continued through November 23, 2005. No violation notice was issued by the Illinois EPA; however, cleanup efforts were monitored by the Des Plaines field office's Bureau of Water. No additional information regarding the extent of remediation was available. It is unknown if the quench oil reached Thorn Creek or if any analytical samples were collected from the ditch or Thorn Creek.

Section 2.3 CERCLA Investigative History

The ALCO facility was placed on CERCLIS on January 28, 1986, following a request for discovery action initiated by the Illinois EPA. The Illinois EPA completed a Preliminary Assessment in April 1986. The site was given a medium priority and was recommended for a Site Inspection. A Site Inspection Report dated June 26, 1987, was completed for U.S. EPA by Ecology and Environment, Inc. Three water samples were collected as part of the Site Inspection. Samples were collected from the South Chicago Heights Water Department, the Park Forest Water Department and a Cook County Forest Preserve Well.

A Focused Site Inspection Prioritization (FSIP) was completed on September 14, 1995, by Black & Veatch Waste Science, Inc. Samples collected during the FSIP included two groundwater samples, one drinking water sample, three sediment samples and three soil samples. Sediment samples contained semi-volatile organic compounds (SCOVs), metals, pesticides and polychlorinated biphenyls at concentrations significantly above background. SVOCs and metals were attributable to the site since these compounds were found in samples from the landfill.

In December 1995, the Illinois EPA performed a Site Team Evaluation Prioritization (STEP) at the ALCO site. Eight sediment samples were collected from the Thorn Creek drainage system during the STEP. Two pesticides were detected at concentrations significantly above background in one sediment sample. Six sediment samples contained arsenic and copper concentrations that exceed the Ontario Sediment Benchmarks. Based on the results of the STEP investigation, it was determined that further assessment of the site was warranted. Creek sampling results from the STEP however, did not replicate the results of the FSIP.

Section 3.0 Other Cleanup Authorities and Activities

The ALCO site was enrolled in the Illinois EPA's SRP in December 2008 in pursuit of a Comprehensive NFR Letter for industrial/commercial use of the property. The property was enrolled in the SRP in response to a potential change in ownership. Ten Recognized Environmental Conditions (RECs) were identified on the property in reports submitted to the Illinois EPA. The ten RECs consisted of the former UST locations and oil house sump, the former settling ponds, the historic landfill area, the former oil-water separator, mercury contamination near MW-2 & 3, quench oil tanks, various areas around the perimeter of the site building, the machine shop, and transformer areas.

A Phase II Environmental Site Assessment (ESA) was conducted in May 2008 and included the collection of 15 soil samples and the installation of three monitoring wells. Additional investigation activities were performed between December 2008 and May 2009. An additional 111 soil samples were collected from RECs and two additional monitoring wells were installed. Figure - 6 contains the locations of soil borings and monitoring wells installed on the property, as well as the location of engineered barriers. Results of the investigation activities revealed areas of the subject property where benzene, naphthalene, Polynuclear Aromatic Hydrocarbons (PAHs), lead, arsenic, chromium, manganese, and mercury exceeded applicable Illinois EPA soil Remedial Objectives (ROs). Groundwater samples from monitoring wells contained arsenic, iron, manganese, chromium and lead above Class I groundwater ROs.

Areas containing soil contamination above applicable ROs were addressed through the use of institutional controls, engineered barriers, and remediation (excavation). The property use has been restricted to industrial/commercial use and three locations on the property are utilizing engineered barriers to address ingestion and inhalation RO exceedances (Figure - 6). The engineered barriers consist of concrete or geotextile membrane and one foot of compacted gravel. Contaminated material was excavated from two RECs. A construction worker caution report was to be used as an institutional control to address exceedances of the construction worker ingestion and inhalation ROs.

Groundwater modeling calculations were used to determine if inorganic compounds present above Class I groundwater ROs would migrate off-site. Iron, arsenic and manganese were

modeled to exceed Class I groundwater ROs at the western property boundary; however, concentrations above Class I groundwater ROs is predicted to remain within the area covered by the Chicago Heights groundwater ordinance. Iron concentrations were modeled to exceed the surface water RO at Thorn Creek; however, a Tier 3 demonstration approved by the Illinois EPA was used to demonstrate that Thorn Creek would not be impacted adversely by the iron concentrations. A Tier 3 demonstration is a tool used by the Illinois EPA site remediation program (SRP) to demonstrate acceptable risk (i.e., a risk assessment). For this site, it was approved by the SRP and applied to the issuance of the NFR letter within the site remediation program. The Chicago Heights groundwater ordinance and offsite contamination notifications were used to exclude the groundwater ingestion exposure pathway during evaluation in the SRP.

Through the use of institutional controls, engineered barriers and the Tier 3 groundwater ingestion pathway exclusion, a Comprehensive NFR Letter was issued to the remedial applicant on April 4, 2012. The landfill cap was not required as an engineered barrier so there is no requirement for it to be maintained as a condition of the NFR letter. A copy of the NFR Letter is attached as Appendix-A.

A site reconnaissance of the subject property was conducted on March 26, 2014 as part of the SR. During the site reconnaissance, large masses of uncovered slag material were noted on the side slopes of the former landfill. After further inspection, additional slag material ranging in size from small gravel sized pieces to boulder sized pieces were observed throughout the slopes of the landfill and beyond into the lower lying areas south and west of the former landfill. Slag material was observed within the drainage channel on the southern side of the property that leads to Thorn Creek and in areas of standing water.

The Illinois EPA returned to the site on September 25, 2014 to analyze materials observed on March 26, 2014. The Illinois EPA field analyzed approximately 20 locations throughout the landfilled area using an X-Ray Fluorescence (XRF) instrument to determine if elevated concentrations of metals were present in the slag material and exposed areas of the landfill. Following the XRF field analysis, eight analytical samples were collected for laboratory analysis. XRF results and laboratory analytical results are provided in Appendix – D. Figure – 7 contains the locations of the XRF field analysis locations and the eight sampling locations. Five samples were collected from exposed slag material and were analyzed for total metals and Toxicity

Characteristic Leaching Proceedure (TCLP) metals. Two sediment samples were collected from the drainage ditch located to the south of the former landfill and were analyzed for volatile organic compounds (VOCs), SVOCs and total metals. One sediment sample was collected from a wetland area located just west of the toe of the former landfill and was analyzed for total metals.

XRF results of the slag material revealed elevated concentrations of chromium, iron, and manganese. Laboratory analytical results were compared to Illinois EPA ROs identified in 35 Illinois Administrative Code (IAC) Part 742 for industrial / commercial properties. Laboratory analytical results from samples collected during the September 25, 2014 site inspection identified chromium concentrations exceeding the industrial / commercial inhalation RO of 690 mg/kg at two waste sample locations. Manganese concentrations exceeded the industrial / commercial ingestion RO of 41,000 mg/kg at three waste sample locations, and the construction worker inhalation and ingestion ROs at four waste sample locations. Manganese, lead, and vanadium were detected in various TCLP metal samples above the migration to Class I groundwater ROs. Sediment samples collected during the site inspection did not contain metal concentrations above industrial / commercial ROs. However, chromium and manganese concentrations from sediment sample X-103 were found to exceed the Ontario sediment guidelines severe effect levels.

During the September 25, 2014 site inspection, a slight sheen was visible on the water in the drainage ditch that leads to Thorn Creek below the 48-inch concrete drainage pipe. Illinois EPA field personnel returned to the site on September 30, 2014 to collect a surface water sample from the drainage ditch. The surface water sample was laboratory analyzed for VOCs and SVOCs. No VOCs or SVOCs were detected above the laboratory analytical reporting limits in the surface water sample.

Section 4.0 Summary and Conclusion

On February 26, 2013, the Illinois EPAs OSE was tasked by the USEPA Region V to conduct a Site Reassessment at the ALCO Springs Industries Inc. site in Chicago Heights, Cook County, Illinois. The ALCO site is located at 2300 Euclid Avenue in Chicago Heights and occupies approximately 20-acres. ALCO is an active manufacturer of steel springs for heavy machinery.

Manufacturing activities at the subject property began as early as 1913 and were still ongoing at the time of this assessment.

Regulatory actions at the subject property began in November 1980, when Illinois EPA responded to a complaint that the facility was discharging process water into Thorn Creek which is located near the western property boundary. Following a series of inspections by the Illinois EPA, a two foot clay cap was placed on an on-site unpermitted landfill located on the western portion of the property. In November 2005, the property owner notified IEMA of an oil release from a 48-inch sewer line located on the southwest portion of the property. An emergency response team was on-site the day of the release and placed absorbent pads and socks to soak up the visually present oil. Remedial activities were undertaken to prevent the quench oil from reaching Thorn Creek. It is unknown if the quench oil reached Thorn Creek or if any analytical samples were collected from the ditch or Thorn Creek in response to the release.

The ALCO facility was placed on CERCLIS on January 28, 1986, following a request for discovery action initiated by the Illinois EPA. CERCLA actions performed at the subject property include an April 1986 Preliminary Assessment, a June 1987 Site Inspection, a September 1995 Focused Site Inspection Prioritization (FSIP), and a December 1995 Site Team Evaluation Prioritization (STEP).

The subject property was enrolled in the Illinois EPA's SRP in December 2008. The remedial applicant received a Comprehensive NFR Letter from the Illinois EPA on April 4, 2012. The Comprehensive NRF Letter identifies land use limitations and preventative, engineering, and institutional controls which were utilized to meet the requirements of 35 IAC Part 742.

On December 18, 1991 (amended April 6, 1995) a Superfund Memorandum of Agreement (SMOA) was signed between Illinois EPA and U.S. EPA Region 5. The SMOA states that if a site has been remediated or given a no-action determination under a state cleanup program, the site will not be expected to require further response actions. U.S. EPA Region 5 will not plan or anticipate any federal response action under Superfund law unless the site poses an imminent threat or emergency situation. A copy of the SMOA can be found in Appendix-B.

During an Illinois EPA site reconnaissance of the subject property on March 26, 2014, exposed slag and landfilled material were observed throughout the landfilled area and low lying areas

beyond the toe of the landfill. On September 25, 2014, Illinois EPA field analyzed exposed waste material using an XRF instrument and collected laboratory analytical samples of exposed waste material. Sediment samples were also collected from three locations and a surface water sample was collected from a drainage ditch on September 30, 2014. Concentrations of chromium and manganese were detected in waste samples above applicable Illinois EPA ROs. TCLP sample results for manganese, lead and vanadium exceeded Illinois EPA Class I migration to groundwater ROs.

All of the migration pathways and the soil exposure pathway were considered during evaluation of the ALCO property. An observed release to the air migration pathway has not been documented. Soil and groundwater contamination above Illinois EPA approved ROs identified during the sites enrollment in the Illinois EPA SRP were addressed by use of approved engineered barriers, institutional controls and Tier 3 evaluations. However, samples collected from exposed landfill materials by Illinois EPA in September of 2014 were found to contain concentrations of chromium and manganese above applicable Illinois EPA ROs.

The surface water migration pathway remains a pathway of concern since a portion of the 15-mile TDL is considered a fishery based on the Illinois Department of Natural Resources Division of Fisheries, and approximately 17-miles of wetland frontage was identified along the 15-mile TDL. Sediment samples from the 1995 FSIP contained inorganic compounds significantly above background. Sediment samples collected in the December 1995 STEP did not contain hazardous compounds attributable to the subject property significantly above background. Corrective actions performed in response to the November 2005 release of quench oil were overseen by the Illinois EPA's Bureau of Water and no violation notices were issued. No documentation was available to indicate if quench oil associated with the 2005 release had impacted Thorn Creek.

Although contamination identified on the property during enrollment in the Illinois EPA's SRP has been minimized through the use of preventative /engineered barriers, and institutional controls defined in the NFR Letter, there appears to be little or no cover material on the flanks of the onsite landfill. Landfilled material containing chromium and manganese above applicable Illinois EPA remediation objectives is exposed on the flanks of the landfill, in low lying areas beyond the landfill, in a drainage ditch that leads to Thorn Creek, and in areas of standing water

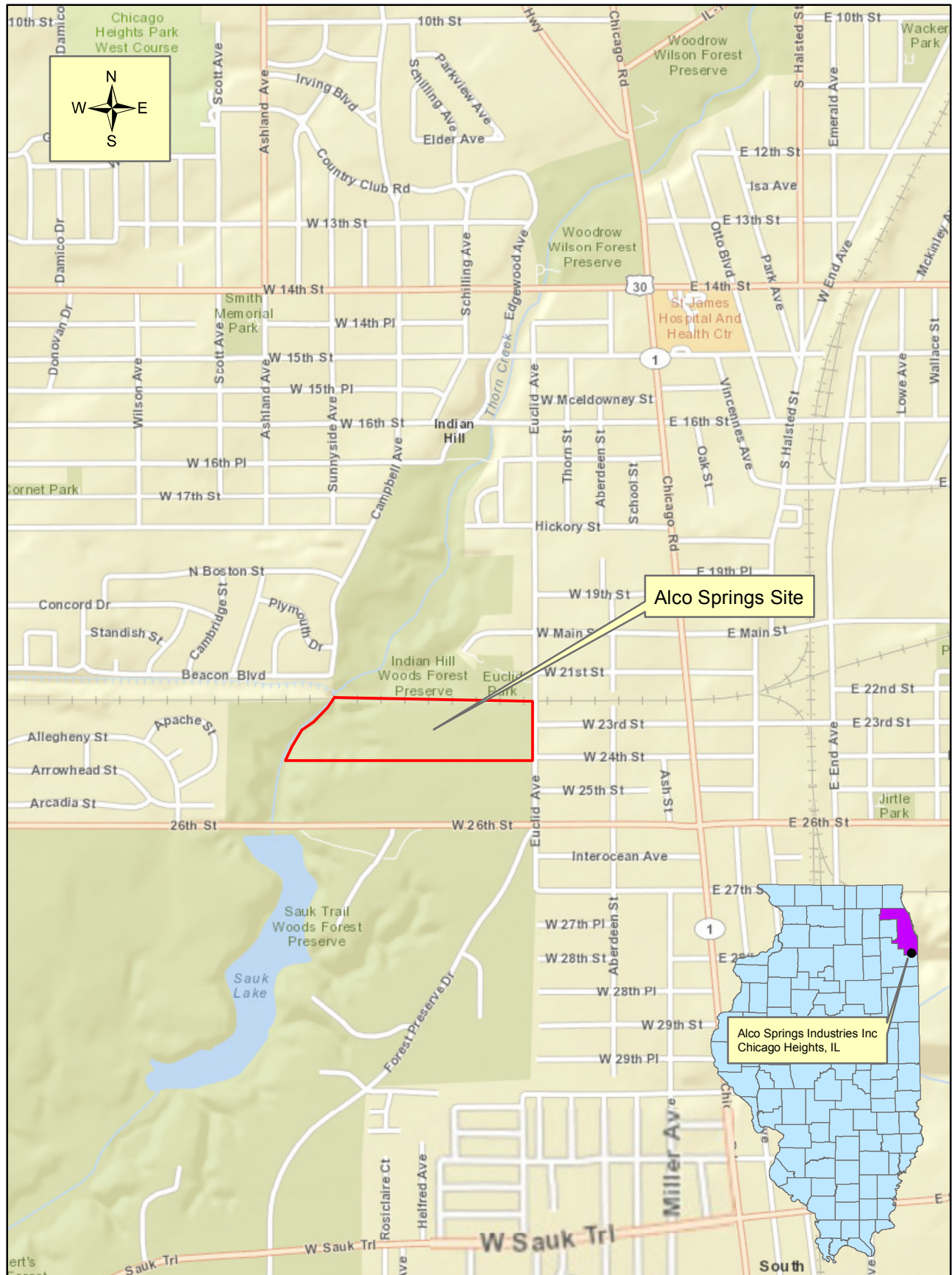
near wetland areas. Runoff from the landfill is unimpeded to wetland areas and drainage channels that lead to Thorn Creek.

Section 5.0 References

- (ENVIRON, May 2009): *Site Investigation/Remedial Objectives Report, ALCO Spring Industries, Inc., Chicago Heights, Illinois*, ENVIRON International Corporation, May 2009.
- (Illinois EPA, BOL File): Illinois Environmental Protection Agency, Bureau of Land; File for the ALCO Springs Industries Site, LPC # 0310450012.
- (Illinois EPA, SWAP): Illinois Environmental Protection Agency, Source Water Assessment Program (SWAP) Data combined from various state and federal agencies. The data set is located on and internal GIS Spatial Database Engine at sde.DEFAULT(ms-iepa-gis.adm.epa.state.il.us). Accessed August 2013.
- (IDNR, May 1996): *Illinois Fishing Guide*, Illinois Department of Natural Resources Division of Fisheries, X42604 117M 5-96.
- (U.S. Fish & Wildlife Service, National Wetlands Inventory): U.S. Fish & Wildlife National Wetlands Inventory website at <http://www.fws.gov/wetlands/Data/Google-Earth.html>. Website accessed in March 2014.

FIGURES

FIGURE - 1
Site Location Map
Alco Springs Industries Inc.



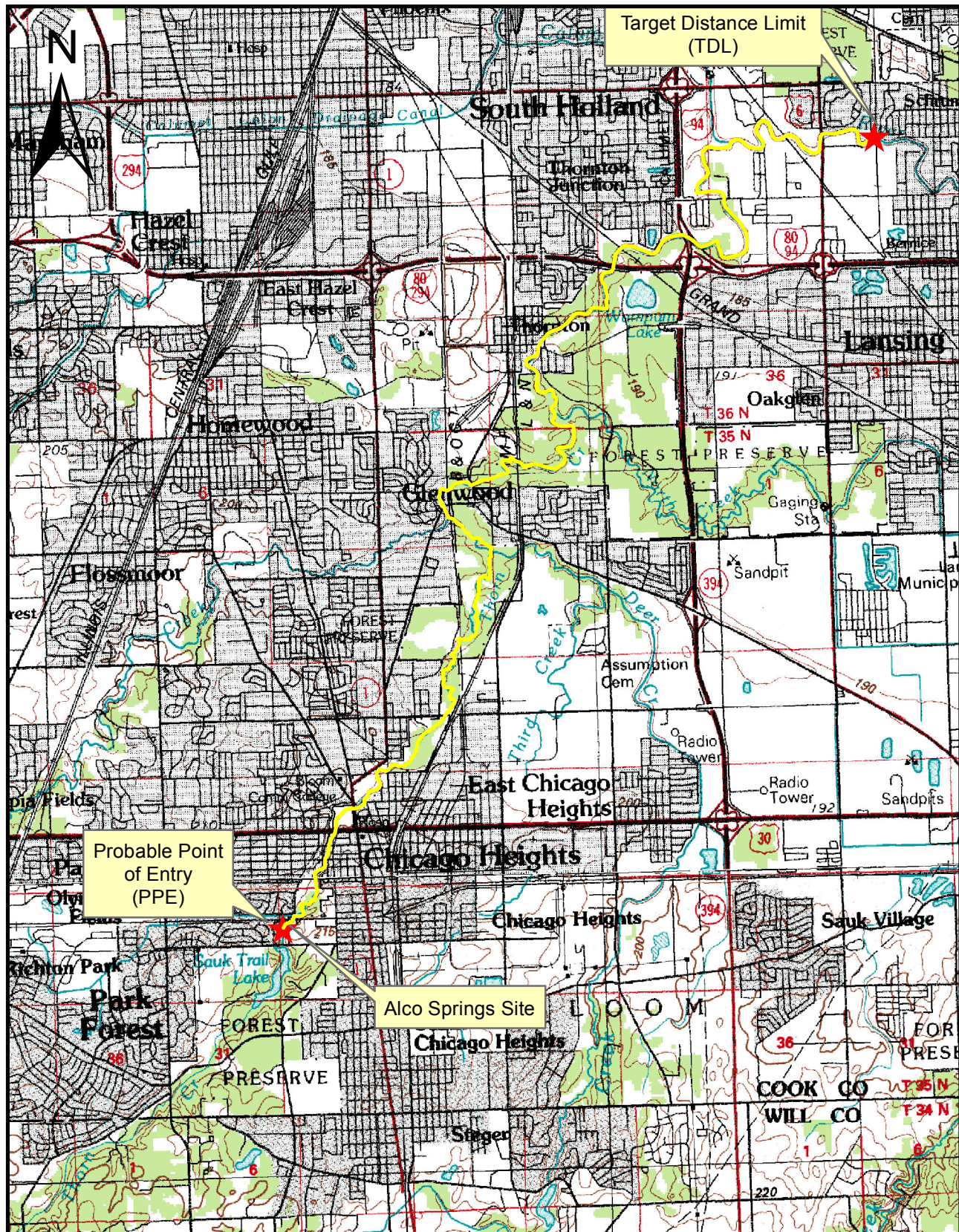
0 0.25 0.5 1 Miles

FIGURE - 2
SITE FEATURE MAP
ALCO Springs



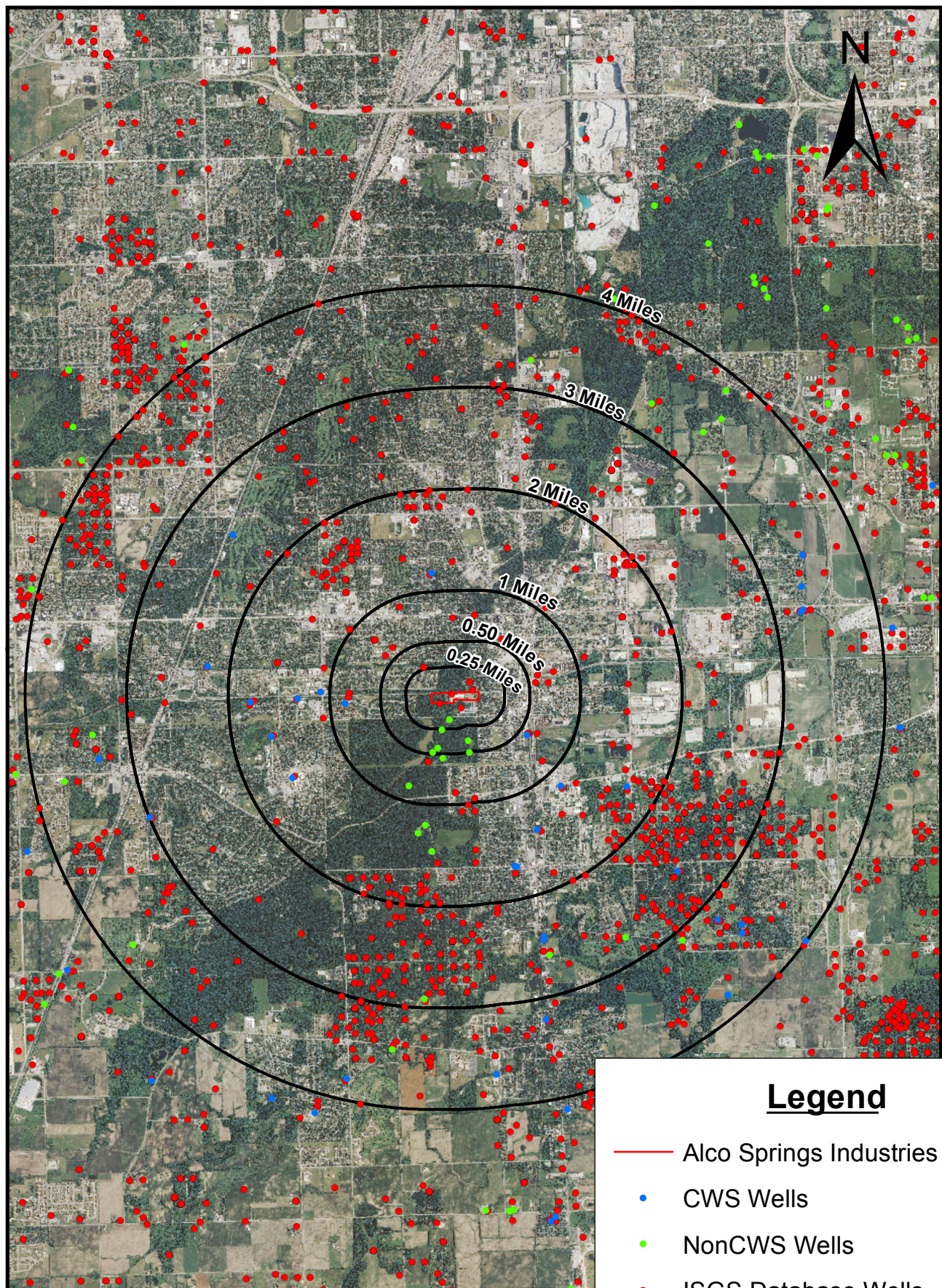
0 500 1,000 2,000 Feet

Figure 3
15-Mile Target Distance Limit Map
Alco Springs Industries Site



0 0.5 1 2 Miles

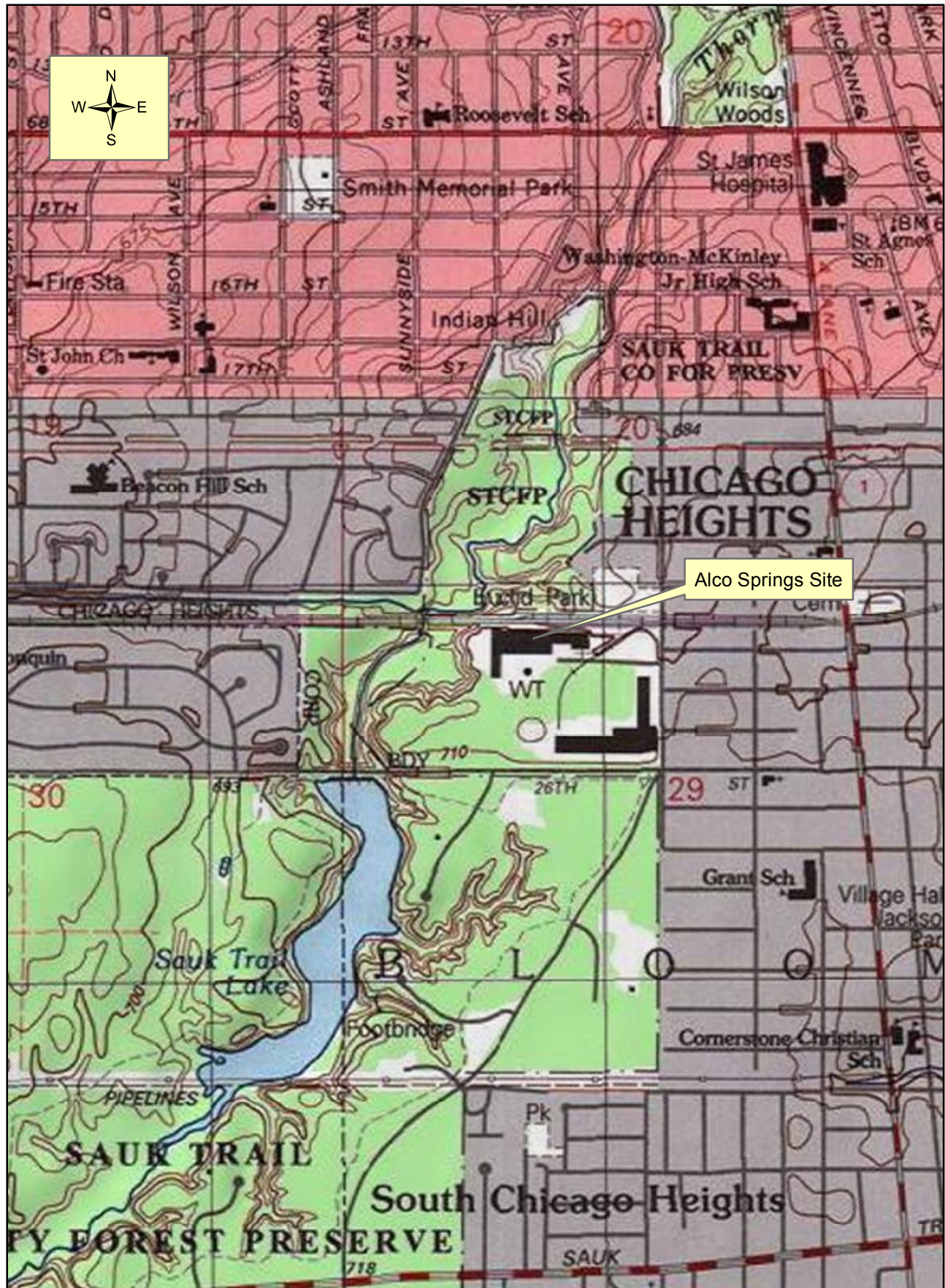
Figure 4
4-Mile Target Distance Map
Alco Springs Industries Site



Legend

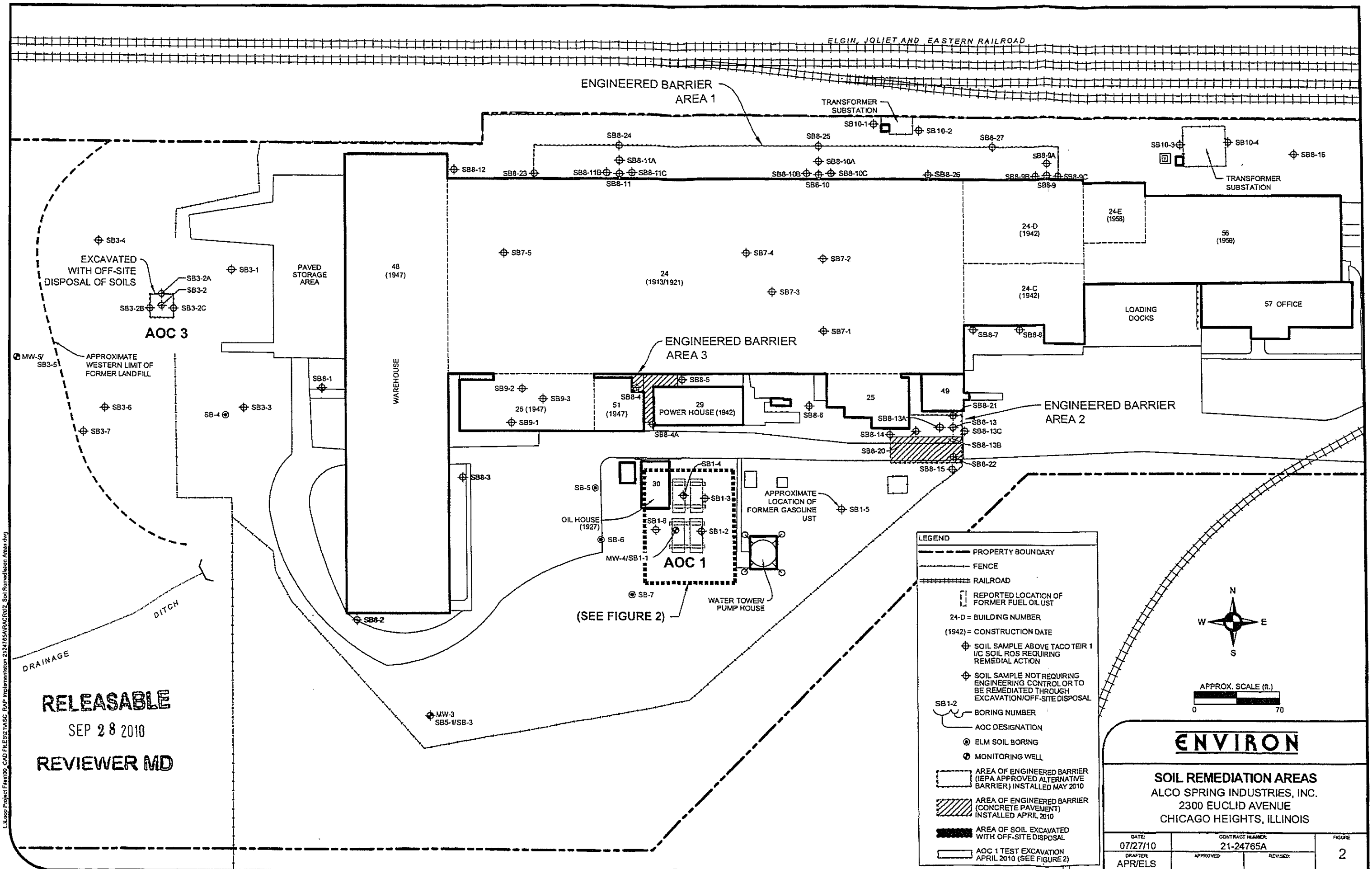
- Alco Springs Industries
- CWS Wells
- NonCWS Wells
- ISGS Database Wells
- CWS Surface Water Intakes
- NonCWS Surface Water Intakes

FIGURE - 5
Topographic Map
Alco Springs Industries Inc.



0 0.25 0.5 1 Miles

FIGURE - 6
SRP Soil Boring and Monitoring Well Location Map



RELEASABLE
SEP 28 2010
REVIEWER MD

FIGURE - 7
SEPTEMBER 2014 SAMPLING LOCATION MAP
ALCO Springs 9-25-14



0 100 200 400 Feet

● XRF Location
● Sample Location

APPENDIX – A

Illinois EPA Comprehensive No Further Remediation Letter

12-50487

Alco Spring Industries
SR Tech

PREPARED BY:

Name: Mr. David Lendt
A. Stucki Company

Address: 2600 Neville Road
Pittsburgh, Pennsylvania 15225



Doc#: 1210145028 Fee: \$60.00
Eugene "Gene" Moore RHSP Fee: \$10.00
Cook County Recorder of Deeds
Date: 04/10/2012 11:13 AM Pg: 1 of 12

RETURN TO:

Name: Mr. David Lendt
A. Stucki Company

Address: 2600 Neville Road
Pittsburgh, Pennsylvania 15225

RECORDED

NER

IEPA - DIVISION OF RECORDS MANAGEMENT
RELEASABLE

APR 12 2012

REVIEWER MED

RECEIVED

APR 11 2012

IEPA/BOL

THE ABOVE SPACE FOR RECORDER'S OFFICE

This Environmental No Further Remediation Letter must be submitted by the remediation applicant within 45 days of its receipt, to the Office of the Recorder of Cook County.

Illinois State EPA Number: 0310450012

A. Stucki Company, the Remediation Applicant, whose address is 2600 Neville Road, Pittsburgh, Pennsylvania 15225, has performed investigative and/or remedial activities for the remediation site depicted on the attached Site Base Map and identified by the following:

1. Legal description or Reference to a Plat Showing the Boundaries:

That part of the Northwest ¼ of Section 29, Township 35 North, Range 14, east of the Third Principal Meridian, in Cook County, Illinois, more particularly described as follows:

Beginning at a point in the west line of said Section 29, 57.00 feet southwardly at right angles from the centerline of the west bound main track of the Elgin, Joliet and Eastern Railway Company, as now located, said west bound main track being the original main track of said Elgin, Joliet and Eastern Railway Company; thence eastwardly parallel to and 57.00 feet southwardly at right angles from the said centerline of the west bound main track, a distance of 602.56 feet; thence deflecting to the right 102 degrees, 29 minutes from last described course, a distance of 25.6 feet; thence eastwardly, parallel to and 82.00 feet southwardly at right angles from the centerline of said west bound main track, 732.2 feet to a point in the north/south centerline of the Northwest ¼ of said Section 29, thence northwardly along said north/south centerline of said Northwest ¼ of said Section 29, a distance of 25.00 feet to a point 57.00 feet southwardly at right angles from the centerline of said west bound main track; thence eastwardly parallel to and 57.00 feet southwardly at right angles from the centerline of said west bound main track,

(Illinois EPA Site Remediation Program Environmental Notice)

a distance of 1327.11 feet to appoint in the north/south half-section line of said Section 29; thence southwardly along said half-section line, a distance of 1172.33 feet to the center of said Section 29; thence westwardly along the east and the west half-section line of said Section 29, a distance of 2653.74 feet to the southwest corner of the Northwest $\frac{1}{4}$ of said Section 29; thence northwardly along the west line of said Section 29, a distance of 1190.00 feet to the point of beginning, but excepting and excluding therefrom that portion of the aforesaid premises conveyed by ALCO Products, Incorporated, a New York Corporation to Forest Preserve District of Cook County, Illinois by Deed dated November 11, 1937 recorded in the aforesaid Recorder's Office on May 12, 1938 in Book 34292 at Page 84 as Document 12157913; and also excepting and excluding therefrom that portion of the aforesaid premises conveyed by ALCO Products, Incorporated, a New York Corporation to Herman H. Schwartz and Maurice I. Schwartz by Deed dated July 22, 1954 recorded in the aforesaid Recorder's Office on July 29, 1954 in Book 50957 at Page 249 as Document 15973948.

2. Common Address: 2300 Euclid Avenue, Chicago Heights, Illinois
3. Real Estate Tax Index/Parcel Index Numbers: 32-29-106-003, 32-29-107-004, 32-29-07-006, 32-29-107-007, 32-29-107-009
4. Remediation Site Owner: A. Stucki Company
5. Land Use: Industrial/Commercial
6. Site Investigation: Comprehensive

See NFR letter for other terms.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
 PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

(217) 524-3300

April 4, 2012

CERTIFIED MAIL

7009 3410 0002 3752 4779

Mr. David Lendt
 A. Stucki Company
 2600 Neville Road
 Pittsburgh, Pennsylvania 15225

Re: 0310450012 – Cook County
 Chicago Heights / Alco Spring Industries
 2300 Euclid Avenue
 Site Remediation Program/Technical Reports
 No Further Remediation Letter

Dear Mr. Lendt:

The September 2010 *Remedial Action Completion Report* (received September 27, 2010/Illinois EPA Log No. 10-45945) and the March 19, 2012 *Request for Final NFR Letter* (Illinois EPA Log No. 12-50286), as prepared by Environ International Corporation for the above referenced Remediation Site, have been reviewed by the Illinois Environmental Protection Agency ("Illinois EPA"). These Reports demonstrate that the remedial action was completed in accordance with the November 3, 2009 *Addendum to May 2009 Site Investigation/Remediation Objectives Report, and Remedial Action Plan* (received November 5, 2010/Illinois EPA Log No. 09-43045) and the April 7, 2010 *Modification to Remedial Action Plan (RAP)* (received April 12, 2010/Illinois EPA Log No. 10-44481) and 35 Illinois Administrative Code Parts 740 and 742.

The Remediation Site, consisting of 20.3 acres, is located at 2300 Euclid Avenue, Chicago Heights, Illinois. Pursuant to Section 58.10 of the Illinois Environmental Protection Act ("Act") (415 ILCS 5/1 et seq.), your request for a no further remediation determination is granted under the conditions and terms specified in this letter. The Remediation Applicant, as identified on the Illinois EPA's Site Remediation Program DRM-1 Form (received December 22, 2008/Illinois EPA Log No. 08-39963), is the A. Stucki Company.

This comprehensive No Further Remediation Letter ("Letter") signifies a release from further responsibilities under the Act for the performance of the approved remedial action. This Letter shall be considered prima facie evidence that the Remediation Site described in the attached Illinois EPA Site Remediation Program Environmental Notice and shown in the attached Site Base Map does not constitute a threat to human health and the environment and does not require further remediation under the Act if utilized in accordance with the terms of this Letter.

Conditions and Terms of Approval

Level of Remediation and Land Use Limitations

- 1) The Remediation Site is restricted to Industrial/Commercial land use.
- 2) The land use specified in this Letter may be revised if:
 - a) Further investigation or remedial action has been conducted that documents the attainment of objectives appropriate for the new land use; and
 - b) A new Letter is obtained and recorded in accordance with Title XVII of the Act and regulations adopted thereunder.

Preventive, Engineering, and Institutional Controls

- 3) The implementation and maintenance of the following controls are required as part of the approval of the remediation objectives for this Remediation Site.

Preventive Controls:

- 4) At a minimum, a safety plan should be developed to address possible worker exposure in the event that any future excavation and construction activities may occur within the contaminated soil. Any excavation within the contaminated soil will require implementation of a safety plan consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, OSHA regulations (particularly in 29 CFR 1910 and 1926), state and local regulations, and other USEPA guidance. Soil excavated below the ground surface must be returned to the same depth from which it was excavated or properly managed or disposed in accordance with applicable state and federal regulations.

Engineering Controls:

- 5) The Geotextile overlain by one (1) foot of compacted CA-6 barrier, covering the area shown in the attached Site Base Map, must remain over the contaminated soils. This Geotextile plus one (1) foot of CA-6 barrier must be properly maintained as an engineered barrier to inhibit ingestion of the contaminated media.
- 6) The concrete cap barrier, as shown in the attached Site Base Map, must remain over the contaminated soils. This concrete cap barrier must be properly maintained as an engineered barrier to inhibit ingestion of the contaminated media.

Institutional Controls:

- 7) The on-site production well water is prohibited for use for potable purposes.
- 8) Ordinance Number 04-70, adopted October 18, 2004, by the City of Chicago Heights effectively prohibits the installation and use of potable water supply wells in the City of Chicago Heights. This ordinance provides an acceptable institutional control under the following conditions:
 - a) The current owner or successor in interest of this Remediation Site who relies on this ordinance as an institutional control shall:

- i) Monitor activities of the unit of local government relative to variance requests or changes in the ordinance relative to the use of potable groundwater at this Remediation Site; and
 - ii) Notify the Illinois EPA of any approved variance requests or ordinance changes within thirty (30) days after the date such action has been approved.
- b) The Remediation Applicant shall provide written notification to the City of Chicago Heights and to owner(s) of all properties under which groundwater contamination attributable to the Remediation Site exceeds the objectives approved by the Illinois EPA. The notification shall include:
 - i) The name and address of the local unit of government;
 - ii) The citation of Ordinance Number 04-70;
 - iii) A description of the property for which the owner is being sent notice by adequate legal description or by reference to a plat showing the boundaries;
 - iv) A statement that the ordinance restricting the groundwater use has been used by the Illinois EPA in reviewing a request for groundwater remediation objectives;
 - v) A statement as to the nature of the release and response action with the name, address, and Illinois EPA inventory identification number; and
 - vi) A statement as to where more information may be obtained regarding the ordinance.
- c) Written proof of this notification shall be submitted to the Illinois EPA within forty-five (45) days from the date this Letter is recorded to:

Robert E. O'Hara
 Illinois Environmental Protection Agency
 Bureau of Land/RPMS
 1021 North Grand Avenue East
 Post Office Box 19276
 Springfield, IL 62794-9276

- d) The following activities shall be grounds for voidance of the ordinance as an institutional control and this Letter:
 - i) Modification of the referenced ordinance to allow potable uses of groundwater;
 - ii) Approval of a site-specific request, such as a variance, to allow use of groundwater at the Remediation Site or at the affected properties;
 - iii) Failure to provide written proof to the Illinois EPA within forty-five (45) days from the date this Letter is recorded of written notification to the City of Chicago Heights and affected property owner(s) of the intent to use Ordinance Number 04-70 as an institutional control at the Remediation Site; and
 - iv) Violation of the terms and conditions of this No Further Remediation letter.

Other Terms

- 9) Where a groundwater ordinance is used to assure long-term protection of human health (as identified under Paragraph 8 of this Letter), the Remediation Applicant must record a copy of the groundwater ordinance adopted and administered by a unit of local government along with this Letter.
- 10) Where the Remediation Applicant is not the sole owner of the Remediation Site, the Remediation Applicant shall complete the attached *Property Owner Certification of the No Further Remediation Letter under the Site Remediation Program* Form. This certification, by original signature of each property owner, or the authorized agent of the owner(s), of the Remediation Site or any portion thereof who is not a Remediation Applicant shall be recorded along with this Letter.
- 11) Further information regarding this Remediation Site can be obtained through a written request under the Freedom of Information Act (5 ILCS 140) to:

Illinois Environmental Protection Agency
Attn: Freedom of Information Act Officer
Division of Records Management #16
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276
- 12) Pursuant to Section 58.10(f) of the Act (415 ILCS 5/58.10(f)), should the Illinois EPA seek to void this Letter, the Illinois EPA shall provide notice to the current title holder and to the Remediation Applicant at the last known address. The notice shall specify the cause for the voidance, explain the provisions for appeal, and describe the facts in support of this cause. Specific acts or omissions that may result in the voidance of the Letter under Sections 58.10(e)(1)-(7) of the Act (415 ILCS 5/58.10(e)(1)-(7)) include, but shall not be limited to:
 - a) Any violation of institutional controls or the designated land use restrictions;
 - b) The failure to operate and maintain preventive or engineering controls or to comply with any applicable groundwater monitoring plan;
 - c) The disturbance or removal of contamination that has been left in-place in accordance with the Remedial Action Plan. Access to soil contamination may be allowed if, during and after any access, public health and the environment are protected consistent with the Remedial Action Plan;
 - d) The failure to comply with the recording requirements for this Letter;
 - e) Obtaining the Letter by fraud or misrepresentation;
 - f) Subsequent discovery of contaminants, not identified as part of the investigative or remedial activities upon which the issuance of the Letter was based, that pose a threat to human health or the environment;
 - g) The failure to pay the No Further Remediation Assessment Fee within forty-five (45) days after receiving a request for payment from the Illinois EPA;

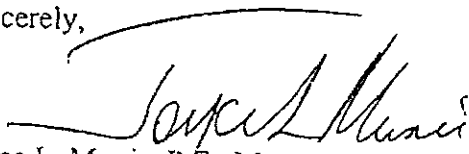
- h) The failure to pay in full the applicable fees under the Review and Evaluation Services Agreement within forty-five (45) days after receiving a request for payment from the Illinois EPA.
- 13) Pursuant to Section 58.10(d) of the Act, this Letter shall apply in favor of the following persons:
- a) A. Stucki Company;
 - b) The owner and operator of the Remediation Site;
 - c) Any parent corporation or subsidiary of the owner of the Remediation Site;
 - d) Any co-owner, either by joint-tenancy, right of survivorship, or any other party sharing a relationship with the owner of the Remediation Site;
 - e) Any holder of a beneficial interest of a land trust or inter vivos trust, whether revocable or irrevocable, involving the Remediation Site;
 - f) Any mortgagee or trustee of a deed of trust of the owner of the Remediation Site or any assignee, transferee, or any successor-in-interest thereto;
 - g) Any successor-in-interest of the owner of the Remediation Site;
 - h) Any transferee of the owner of the Remediation Site whether the transfer was by sale, bankruptcy proceeding, partition, dissolution of marriage, settlement or adjudication of any civil action, charitable gift, or bequest;
 - i) Any heir or devisee of the owner of the Remediation Site;
 - j) Any financial institution, as that term is defined in Section 2 of the Illinois Banking Act and to include the Illinois Housing Development Authority, that has acquired the ownership, operation, management, or control of the Remediation Site through foreclosure or under the terms of a security interest held by the financial institution, under the terms of an extension of credit made by the financial institution, or any successor-in-interest thereto; or
 - k) In the case of a fiduciary (other than a land trustee), the estate, trust estate, or other interest in property held in a fiduciary capacity, and a trustee, executor, administrator, guardian, receiver, conservator, or other person who holds the remediated site in a fiduciary capacity, or a transferee of such party.
- 14) This letter, including all attachments, must be recorded as a single instrument within forty-five (45) days of receipt with the Office of the Recorder of Cook County. For recording purposes, the Illinois EPA Site Remediation Program Environmental Notice attached to this Letter should be the first page of the instrument filed. This Letter shall not be effective until officially recorded by the Office of the Recorder of Cook County in accordance with Illinois law so that it forms a permanent part of the chain of title for the Alco Spring Industries property.
- 15) Within thirty (30) days of this Letter being recorded by the Office of the Recorder of Cook County, a certified copy of this Letter, as recorded, shall be obtained and submitted to the Illinois EPA to:

Robert E. O'Hara
Illinois Environmental Protection Agency
Bureau of Land/RPMS
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

16) In accordance with Section 58.10(g) of the Act, a No Further Remediation Assessment Fee based on the costs incurred for the Remediation Site by the Illinois EPA for review and evaluation services will be applied in addition to the fees applicable under the Review and Evaluation Services Agreement. Request for payment of the No Further Remediation Assessment Fee will be included with the billing statement.

If you have any questions regarding the Alco Spring Industries property, you may contact the Illinois EPA project manager, Todd Hall at (217)557-1409.

Sincerely,

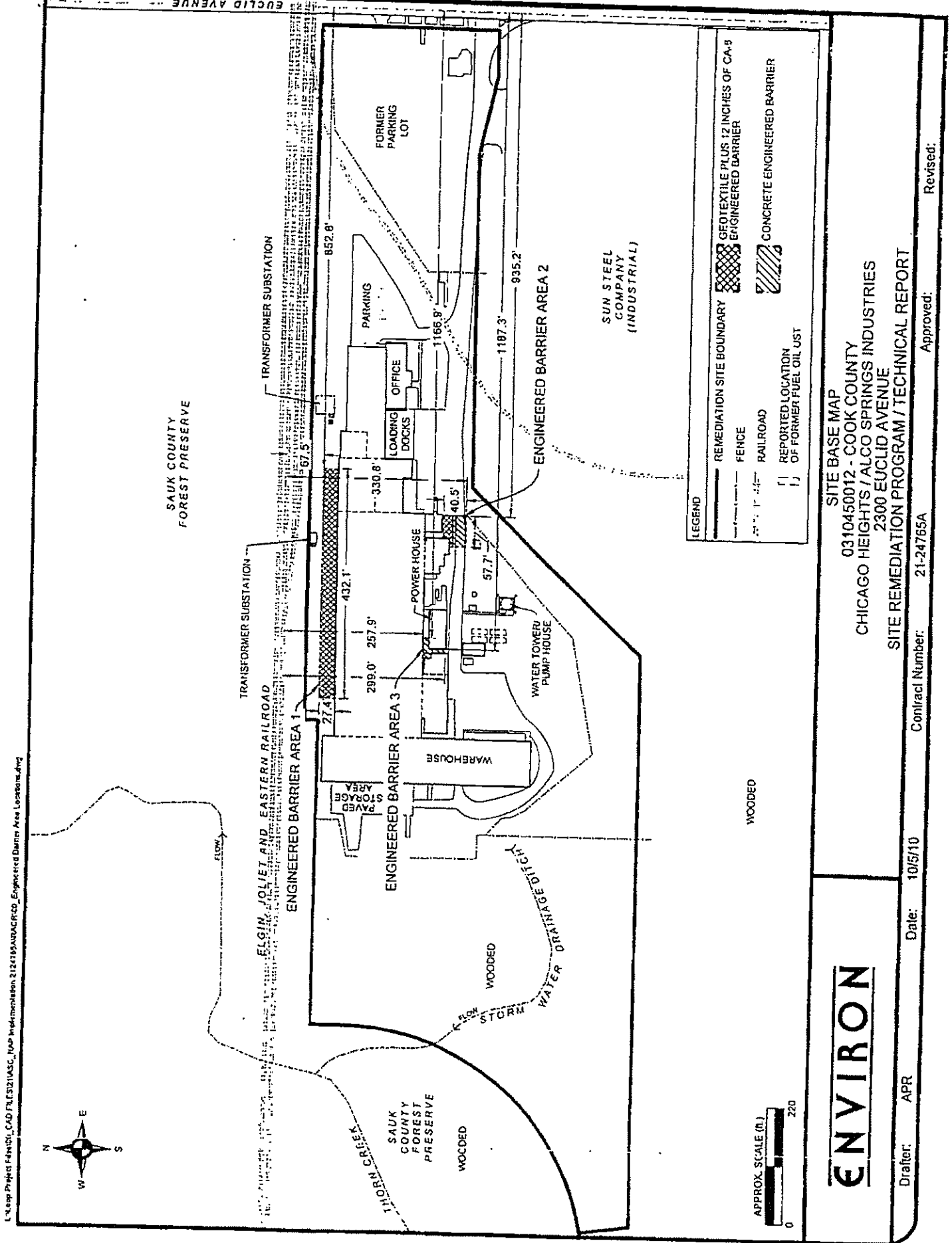


Joyce L. Munie, P.E., Manager
Remedial Project Management Section
Division of Remediation Management
Bureau of Land

Attachments: Illinois EPA Site Remediation Program Environmental Notice
Site Base Map
Property Owner Certification of No Further Remediation Letter under the Site
Remediation Program Form
Instructions for Filing the NFR Letter

cc: Environ International Corporation
Attn: F. Ross Jones
333 West Wacker Drive
Chicago, Illinois 60606

Records Unit
Bob O'Hara



ENVIRON

SITE BASE MAP
0310450012 - COOK COUNTY
CHICAGO HEIGHTS / ALCO SPRINGS INDUSTRIES
2300 EUCALID AVENUE
SITE REMEDIATION PROGRAM / TECHNICAL REPORT

Drafter: APP Date: 10/5/10 Contract Number: 21-24765A Approved: Revised:

ORDINANCE No. 04-70

**AN ORDINANCE PROHIBITING THE USE OF GROUNDWATER
AS A POTABLE WATER SUPPLY BY THE INSTALLATION
OR USE OF POTABLE WATER SUPPLY WELLS OR BY ANY OTHER METHOD**

WHEREAS, certain properties in the City of Chicago Heights, Illinois, have been used over a period of time for commercial/industrial purposes; and,

WHEREAS, because of said use, concentrations of certain chemical constituents in the groundwater beneath the City may exceed Class I groundwater quality standards for potable resource groundwater as set forth in 35 Illinois Administrative Code 620 or Tier 1 residential remediation objectives as set forth in 35 Illinois Administrative Code 742; and,

WHEREAS, the City of Chicago Heights desires to limit potential threats to human health from groundwater contamination while facilitating the redevelopment and productive use of properties that are the source of said chemical constituents.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the City of Chicago Heights, Cook County, Illinois, as follows:

Chapter 43 of the Code of Ordinances of the City of Chicago Heights, Cook County, Illinois, is hereby amended by adding the following new Division:

"Section One. Division 3. Groundwater Bids.

Sec. 43-90. Groundwater as a potable water supply prohibited.

The use or attempt to use as a potable water supply groundwater from within the corporate limits of the City of Chicago Heights by the installation or drilling of wells or by any other method is hereby prohibited.

Sec. 43-91. Definitions.

"Person" is any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, or any other legal entity, or their legal representatives, agents or assigns.

"Potable water" is any water used for human or domestic consumption, including, but not limited to, water used for drinking, bathing, swimming, washing dishes, or preparing foods."

Section Two. The Code of Ordinances of the City of Chicago Heights is hereby amended by repealing Chapter 14½ in its entirety.

Section Three.

- (a) All ordinances or parts of ordinances in conflict with this Ordinance are hereby repealed insofar as they are in conflict with this Ordinance.
- (b) If any provision of this Ordinance or its application to any person or under any circumstances is adjudged invalid, such adjudication shall not affect the validity of the ordinance as a whole or of any portion not adjudged invalid.

Section Four. This Ordinance shall be in full force and effect from and after its passage, approval and publication as provided by law.

PASSED this 18 day of October, 2004.

AYES: 5

NAYS: 0

ABSENT: 1

APPROVED:

Anthony De Luca
Mayor

Attest:

Elizabeth M. Taylor
City Clerk

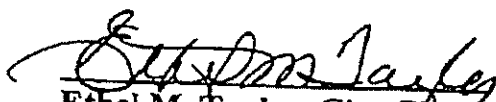
STATE OF ILLINOIS)
COUNTY OF COOK) SS

I, Ethel M. Taylor, duly appointed and acting City Clerk of the City of Chicago Heights, Illinois and as such the keeper of the records of the City Council of the City of Chicago Heights, Illinois do hereby certify that the attached copy of

ORDINANCE NO. 04-70

is a true and correct copy of the original now on file at City Hall, 1601 Chicago Road, Chicago Heights, Illinois.

In witness whereof, I have signed my name and affixed the seal of the City of Chicago Heights, Illinois this 21ST day of OCTOBER, 2004.

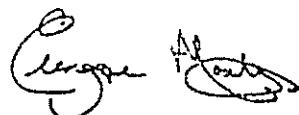

Ethel M. Taylor, City Clerk

(Seal)

I CERTIFY THAT THIS
IS A TRUE AND CORRECT COPY

OF DOCUMENT # 1210145028

APR 10 12



RECORDER OF DEEDS COOK COUNTY

APPENDIX – B

Superfund Memorandum of Agreement (SMOA)

ADDENDUM NO. 1

SUPERFUND MEMORANDUM OF AGREEMENT BETWEEN THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION V

I. BACKGROUND

The Illinois Environmental Protection Agency ("IEPA") and the United States Environmental Protection Agency, Region V ("Region V") entered a Superfund Memorandum of Agreement (SMOA) effective December 18, 1991. Among other things, the SMOA established operating procedures for general Superfund program coordination and communication between IEPA and Region V.

II. BROWNFIELDS

In 1993 IEPA and Region V began developing strategies to promote the remediation and redevelopment of "Brownfield" sites. Both agencies recognize that a key factor to the Brownfields program in Illinois is for both agencies to exercise their authorities and use their resources in ways that are mutually complementary and are not duplicative. Two operational factors are important in this regard. First, the IEPA has successfully operated a voluntary cleanup since the late 1980s. This program, more formally known as the Pre-Notice Site Cleanup Program ("PNSCP"), provides guidance, assistance and oversight by IEPA to owners and operators of sites in Illinois who perform site assessment and remediation in accordance with the practices, and under the approval, of the IEPA. In addition IEPA has established a consistent cleanup objectives process across all its remediation programs (PWSCP, CERCLA, RCRA, and LUST) which is protective of human health and the environment. Second, USEPA has administered a national site assessment program to assess sites listed on the federal CERCLIS list. This assessment process identifies and prioritizes sites for remediation needs and also establishes a "no further remedial action planned" or NFRAP category of sites. As a result of the success of these two programs, IEPA and Region V have concluded that the principles and procedures set forth in this Addendum will meaningfully assist in the remediation and development of Brownfield sites.

III. PRINCIPLES

If a site in Illinois has been remediated or investigated under the practices and procedures of the Illinois PNSCP and IEPA has approved the remediation as complete or made a no-action determination upon review of an investigation, consistent with existing information the site will not be expected to require further response actions. Accordingly, Region 5 will not plan or anticipate any federal action under Superfund law unless, in exceptional circumstances, the site poses an imminent threat or emergency situation. Region 5 will also continue to work with Illinois to remove any concerns about federal activity under Superfund so as to encourage appropriate redevelopment.

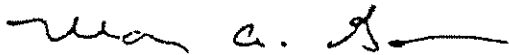
This Principle does not apply to sites which have been listed on the National Priorities List or sites subject to an order or other enforcement action under Superfund law or sites imminently threatening public health or the environment. Future IEPA activities at the site will be based on the conditions of the remediation approval and whether any imminent threat subsequently arises.

IV. REPORTING

On an annual basis IEPA will report to Region V on the Following:

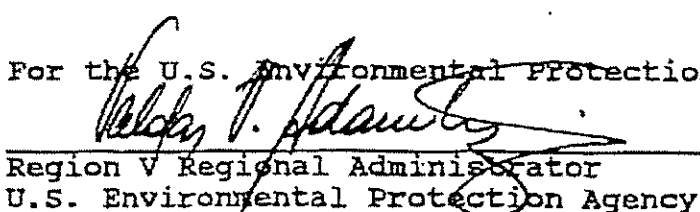
- 1) number of sites in the PNSCP;
- 2) sites entering the PNSCP the previous year;
- 3) sites having received approvals by IEPA of full or partial completions in the previous year;

For the Illinois Environmental Protection Agency



Director, Illinois Environmental Protection Agency

For the U.S. Environmental Protection Agency, Region V


Region V Regional Administrator
U.S. Environmental Protection Agency

Date

4/06/95.

APPENDIX – C

Site Photos

ILLINOIS EPA PHOTO LOG

SITE NAME: ALCO Springs Industries Inc.

LPC #: LPC# 0310450012 **CERCLIS ID:** ILD 048 300 412 **COUNTY:** Cook

DATE: March 26, 2014

TIME:

PHOTO BY: Jim Salch

PHOTO NO: 1

DIRECTION: East

COMMENTS: Photo of 48-inch concrete drainage tile and absorbent socks.



DATE: March 26, 2014

TIME:

PHOTO BY: Jim Salch

PHOTO NO: 2

DIRECTION: East

COMMENTS: Close up of photo 1 showing absorbent socks and some slag material on the left side of photo.



ILLINOIS EPA PHOTO LOG

SITE NAME: ALCO Springs Industries Inc.

LPC #: LPC# 0310450012 **CERCLIS ID:** ILD 048 300 412 **COUNTY:** Cook

DATE: March 26, 2014

TIME:

PHOTO BY: Jim Salch

PHOTO NO: 3

DIRECTION: East

COMMENTS: Photo of the west flank of the landfill. Can see exposed waste material on the slope and large erosional channel and undercut toe.



DATE: March 26, 2014

TIME:

PHOTO BY: Jim Salch

PHOTO NO: 4

DIRECTION: East

COMMENTS: Photo of the drainage channel where the 48-inch drainage tile is located. Slope on the left is the landfill. Remnants of the diking system used to collect oil from the release are present in the center of the channel.



ILLINOIS EPA PHOTO LOG

SITE NAME: ALCO Springs Industries Inc.
--

LPC #: LPC# 0310450012	CERCLIS ID: ILD 048 300 412	COUNTY: Cook
-------------------------------	------------------------------------	---------------------

DATE: March 26, 2014

TIME:

PHOTO BY: Jim Salch

PHOTO NO: 5


DIRECTION: East


COMMENTS: Photo of slag material exposed on the south flank of the landfill above the drainage channel that leads to Thorn Creek.
--



ILLINOIS EPA PHOTO LOG

SITE NAME: ALCO Springs Industries Inc.		
LPC #: LPC# 0310450012	CERCLIS ID: ILD 048 300 412	COUNTY: Cook

DATE: September 25, 2014	
TIME: 10:31	
PHOTO BY: Jim Salch	
PHOTO NO: 1	
DIRECTION: North	
COMMENTS: Photo of a chunk of slag located above loose slag material in Photo 2. Sample material for X-101.	

DATE: September 25, 2014	
TIME: 10:31	
PHOTO BY: Jim Salch	
PHOTO NO: 2	
DIRECTION:	
COMMENTS: Photo of loose slag material just north of path leading down landfill slope. XRF # 2 location.	

ILLINOIS EPA PHOTO LOG

SITE NAME: ALCO Springs Industries Inc.		
LPC #: LPC# 0310450012	CERCLIS ID: ILD 048 300 412	COUNTY: Cook

DATE: September 25, 2014
TIME: 10:41
PHOTO BY: Jim Salch
PHOTO NO: 3
DIRECTION: North
COMMENTS: Photo of the south flank of the landfill above drainage way. Large chunk of exposed slag. Location of XRF # 6 & 7.



DATE: September 25, 2014
TIME: 10:49
PHOTO BY: Jim Salch
PHOTO NO: 4
DIRECTION:
COMMENTS: Photo of chunk of slag material on the south flank of landfill near the drainage channel where the 48-inch drainage tile is located. Where XRF # 9 was taken and sample X-102.



ILLINOIS EPA PHOTO LOG

SITE NAME: ALCO Springs Industries Inc.

LPC #: LPC# 0310450012 **CERCLIS ID:** ILD 048 300 412 **COUNTY:** Cook

DATE: September 25, 2014

TIME: 10:59

PHOTO BY: Jim Salch

PHOTO NO: 5

DIRECTION: East

COMMENTS: Photo of a large mass of slag located on the southern slope of the landfill directly above the drainage ditch. 48-inch concrete drainage tile and absorbent socks. Location of XRF #12.



DATE: September 25, 2014

TIME: 11:03

PHOTO BY: Jim Salch

PHOTO NO: 6

DIRECTION:

COMMENTS: Photo of slag material in the drainage ditch. Location of XRF #13.



ILLINOIS EPA PHOTO LOG

SITE NAME: ALCO Springs Industries Inc.

LPC #: LPC# 0310450012 **CERCLIS ID:** ILD 048 300 412 **COUNTY:** Cook

DATE: September 25, 2014

TIME: 11:12

PHOTO BY: Jim Salch

PHOTO NO: 7

DIRECTION: North

COMMENTS: Photo of large mass of slag material located on the southwest toe of landfilled material just north of the drainage ditch. Location of XRF #14.



ILLINOIS EPA PHOTO LOG

SITE NAME: ALCO Springs Industries Inc.

LPC #: LPC# 0310450012 **CERCLIS ID:** ILD 048 300 412 **COUNTY:** Cook

DATE: September 25, 2014

TIME: 11:28

PHOTO BY: Jim Salch

PHOTO NO: 8

DIRECTION: East

COMMENTS: Photo of the west face of landfill showing exposed waste material and lack of cover. Location of XRF #18 & 19. Location of sample X-106.



DATE: September 25, 2014

TIME: 11:38

PHOTO BY: Jim Salch

PHOTO NO: 9

DIRECTION: North

COMMENTS: Photo of slag material in standing water between path and the berm containing the concrete drainage pipe west of the landfill face. Near monitoring well located on path.



APPENDIX – D

September 2014 Analytical Data

XRF ANALYTICAL DATA TABLE
Alco Springs Industries Inc.
September 25, 2014

Description	Reading	Date	Livetime	Cr	Cr +/-	Mn	Mn +/-	Fe	Fe +/-	Pb	Pb +/-	Co	Co +/-	Ni	Ni +/-	Cu	Cu +/-
Calibration	1	25-Sep-14	49.2	1109	156	5798	253	60957	1401	67	10	<LOD	563	<LOD	123	<LOD	59
Loose Slag Material	2	25-Sep-14	14.6	5135	393	159423	4153	137150	3565	44	12	<LOD	798	539	54	<LOD	73
Large Mass of Slag	3	25-Sep-14	14.26	<LOD	800	<LOD	915	<LOD	906	<LOD	98	<LOD	217	<LOD	214	<LOD	197
Loose Slag Below Surface	4	25-Sep-14	6.55	2182	268	9863	450	127277	3544	<LOD	32	<LOD	1016	<LOD	175	<LOD	74
Error	5	25-Sep-14	14.93	2875	397	40213	1373	489211	14000	172	22	<LOD	2001	<LOD	296	<LOD	89
Large Mass of Slag	6	25-Sep-14	13.76	287	77	2086	109	34380	620	112	9	563	110	<LOD	77	46	14
Soil Adjacent to Mass of Slag	7	25-Sep-14	12.32	287	304	27391	902	227933	5986	139	17	<LOD	1255	<LOD	211	<LOD	72
Large Mass of Slag	8	25-Sep-14	14.52	2723	928	19616	1004	1037058	34950	374	38	<LOD	3479	<LOD	507	<LOD	140
Slag at Bottom of Slope	9	25-Sep-14	12.39	13889	180	19616	1004	1037058	34950	374	38	<LOD	3479	<LOD	507	<LOD	140
Soil Near Reading #9	10	25-Sep-14	11.07	<LOD	101	130	29	3802	101	29	4	123	33	<LOD	45	<LOD	29
Loose Slag on Landfill Slope	11	25-Sep-14	15	858	180	14385	520	97618	2498	37	10	<LOD	808	<LOD	140	<LOD	62
Large Mass of Slag	12	25-Sep-14	14.78	3788	386	54147	1960	54275	1919	<LOD	34	<LOD	674	205	55	<LOD	90
Slag in Drainage Ditch	13	25-Sep-14	15.16	4333	329	31559	970	119040	3088	<LOD	24	<LOD	863	<LOD	152	<LOD	61
Large Mass of Slag	14	25-Sep-14	14.65	2628	288	68575	1895	139323	3603	382	26	<LOD	917	231	58	<LOD	67
Large Mass of Slag	15	25-Sep-14	15.14	2560	258	62034	1680	62805	1663	<LOD	26	<LOD	546	197	40	<LOD	62
Soil Near Reading #15	16	25-Sep-14	12.45	<LOD	172	327	53	22281	421	47	6	322	87	<LOD	73	<LOD	38
Large Mass of Slag	17	25-Sep-14	14.05	14324	647	130420	3439	172581	4441	<LOD	30	<LOD	929	499	57	<LOD	70
Loose Slag at Toe of Landfill	18	25-Sep-14	14.52	350	93	1498	113	22079	549	28	7	<LOD	328	<LOD	88	52	17
Chunk of Slag in Toe of Landfill	19	25-Sep-14	15.32	<LOD	270	902	99	10019	324	32	8	<LOD	234	<LOD	83	<LOD	46
Piece of Slag Along Path	20	25-Sep-14	15.66	7759	518	126778	3803	134016	3963	<LOD	26	<LOD	890	459	57	<LOD	74
Loose Material Near Concrete Tile	21	25-Sep-14	13.59	<LOD	178	202	48	11573	277	37	6	<LOD	204	<LOD	69	<LOD	35
Soil Material Near Concrete Tile	22	25-Sep-14	13.03	892	128	3215	168	37980	846	146	12	<LOD	416	<LOD	100	128	21

XRF ANALYTICAL DATA TABLE
Alco Springs Industries Inc.
September 25, 2014

Description	Reading	Date	LiveTime	Zn	Zn +/-	As	As +/-	Rb	Rb +/-	Sr	Sr +/-	Zr	Zr +/-	Mo	Mo +/-	Cd	Cd +/-
Calibration	1	25-Sep-14	49.2														
Loose Slag Material	2	25-Sep-14	14.6	96	14	<LOD	26	33	4	406	14	236	10	<LOD	19	<LOD	87
Large Mass of Slag	3	25-Sep-14	14.26	735	43	<LOD	29	<LOD	8	87	7	84	7	<LOD	21	<LOD	100
Loose Slag Below Surface	4	25-Sep-14	6.55	<LOD	171	<LOD	55	<LOD	48	<LOD	48	<LOD	70	<LOD	91	<LOD	323
Error	5	25-Sep-14	14.93	156	22	<LOD	28	14	4	118	8	69	7	27	8	<LOD	108
Large Mass of Slag	6	25-Sep-14	13.76	816	53	<LOD	50	<LOD	13	52	6	49	7	34	8	<LOD	112
Soil Adjacent to Mass of Slag	7	25-Sep-14	12.32	208	14	<LOD	22	29	3	95	4	75	4	<LOD	13	<LOD	64
Large Mass of Slag	8	25-Sep-14	14.52	512	37	<LOD	42	<LOD	9	90	7	49	6	76	8	<LOD	104
Slag at bottom of Slope	9	25-Sep-14	12.39	149	35	<LOD	69	37	7	28	6	41	8	61	10	<LOD	136
Soil Near Reading #9	10	25-Sep-14	11.07	63	7	<LOD	10	15	2	49	3	39	3	12	4	<LOD	51
Loose Slag on Landfill Slope	11	25-Sep-14	15	117	17	<LOD	25	<LOD	9	116	7	76	7	41	7	<LOD	98
Large Mass of Slag	12	25-Sep-14	14.78	125	23	<LOD	28	<LOD	12	96	9	67	8	44	10	<LOD	129
Slag in Drainage Ditch	13	25-Sep-14	15.16	548	36	27	8	<LOD	9	110	7	63	7	<LOD	21	<LOD	99
Large Mass of Slag	14	25-Sep-14	14.65	906	48	91	22	<LOD	8	99	7	232	11	24	7	<LOD	101
Large Mass of Slag	15	25-Sep-14	15.14	223	22	<LOD	23	<LOD	8	95	6	201	10	<LOD	21	<LOD	95
Soil Near Reading #15	16	25-Sep-14	12.45	171	13	<LOD	16	69	4	159	6	103	5	18	4	<LOD	61
Loose Slag	17	25-Sep-14	14.05	124	19	<LOD	21	<LOD	9	79	6	68	7	39	7	<LOD	103
Loose Slag at Toe of Landfill	18	25-Sep-14	14.52	57	10	<LOD	18	36	4	133	6	235	8	17	6	<LOD	79
Chunk of Slag in Toe of Landfill	19	25-Sep-14	15.32	87	13	<LOD	20	16	3	186	9	32	5	<LOD	18	<LOD	87
Piece of Slag Along Path	20	25-Sep-14	13.59	122	21	<LOD	23	<LOD	10	75	7	59	7	<LOD	24	<LOD	113
Loose Material Near Concrete Tile	21	25-Sep-14	13.03	129	12	<LOD	16	32	3	56	4	82	5	<LOD	14	<LOD	70
Soil Material Near Concrete Tile	22	25-Sep-14	13.03	370	23	<LOD	32	28	3	126	6	105	6	20	6	<LOD	78

XRF ANALYTICAL DATA TABLE
Alco Springs Industries Inc.
September 25, 2014

Description	Reading	Date	LiveTime	Sn	Sn +/-	Ba	Ba +/-	Hg	Hg +/-	Ti	Ti +/-
Calibration	1	25-Sep-14	14.6	<LOD	145	<LOD	964	<LOD	27	4860	848
Loose Slag Material	2	25-Sep-14	14.26	<LOD	164	3291	686	<LOD	40	15590	1770
Large Mass of Slag	3	25-Sep-14	6.55	<LOD	491	<LOD	2287	<LOD	9	<LOD	4341
Loose Slag Below Surface	4	25-Sep-14	14.93	218	59	<LOD	1408	<LOD	34	<LOD	3045
Error	5	25-Sep-14	13.76	<LOD	187	<LOD	2140	<LOD	45	<LOD	4946
Large Mass of Slag	6	25-Sep-14	12.32	<LOD	104	<LOD	545	<LOD	20	1397	447
Soil Adjacent to Mass of Slag	7	25-Sep-14	14.52	<LOD	173	<LOD	1560	<LOD	39	4786	1297
Large Mass of Slag	8	25-Sep-14	12.39	<LOD	222	<LOD	3609	<LOD	56	<LOD	8084
Slag at Bottom of Slope	9	25-Sep-14	11.07	<LOD	81	<LOD	294	<LOD	13	<LOD	682
Soil Near Reading #9	10	25-Sep-14	15	<LOD	160	<LOD	1095	<LOD	31	2962	919
Loose Slag on Landfill Slope	11	25-Sep-14	14.78	<LOD	209	<LOD	1586	<LOD	53	<LOD	3618
Large Mass of Slag	12	25-Sep-14	15.16	<LOD	160	<LOD	1440	<LOD	32	6527	1207
Slag in Drainage Ditch	13	25-Sep-14	14.65	<LOD	164	<LOD	1907	<LOD	42	40391	2298
Large Mass of Slag	14	25-Sep-14	15.14	<LOD	156	<LOD	1226	55	15	<LOD	2797
Large Mass of Slag	15	25-Sep-14	12.45	<LOD	99	<LOD	443	<LOD	19	1986	401
Soil Near Reading #15	16	25-Sep-14	14.05	<LOD	169	3242	726	<LOD	35	8822	1648
Loose Slag at Toe of Landfill	17	25-Sep-14	14.52	<LOD	128	<LOD	677	<LOD	22	3730	626
Chunk of Slag in Toe of Landfill	18	25-Sep-14	15.32	<LOD	143	<LOD	667	<LOD	28	<LOD	1654
Piece of Slag Along Path	19	25-Sep-14	15.66	<LOD	181	<LOD	2013	<LOD	43	7982	1602
Loose Material Near Concrete Tile	20	25-Sep-14	13.59	<LOD	113	<LOD	512	<LOD	19	1935	448
Soil Material Near Concrete Tile	21	25-Sep-14	13.03	<LOD	129	<LOD	746	<LOD	25	2101	614



Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received : 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X101** Lab Sample ID: **SI41347-01**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:25

Sample Type: Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: SW-846 6010 Prepared: 10/09/14 07:27

Units: mg/kg dry Analyzed: 10/16/14 10:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	10300	J3	7.25	
Arsenic	ND		1.45	
Barium	292	J3	0.36	
Beryllium	ND		0.07	
Boron	62.7	J3	3.63	
Cadmium	ND		0.36	
Calcium	288000	J3	21.8	
Chromium	517	J3	0.36	
Cobalt	2.14	J3	0.73	
Copper	4.13	J3	0.73	
Iron	33000	J3	72.5	
Lead	2.76	J3	0.36	
Magnesium	32400	J3	36.3	
Manganese	73800	J3	1.09	
Nickel	ND		0.36	
Potassium	779	J3	145	
Silver	8.59	J3	0.36	
Sodium	197	J3	145	
Strontium	131	J3	0.36	
Vanadium	252	J3	0.36	
Zinc	ND		3.63	
Antimony	2.71	J3	1.45	
Selenium	20.8	J3	1.45	
Thallium	18.4	J3	1.45	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAC (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

Reported:
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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X101** Lab Sample ID: **SI41347-01**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:25

Sample Type: Sample Depth: Total Depth:

TCLP Metals by EPA Methods 1311/6010*

Method: 6010-TCLP Prepared: 10/20/14 07:42

Units: mg/L Analyzed: 11/07/14 10:04

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	ND	I	0.06	40000
Antimony	ND		0.01	
Arsenic	ND		0.01	5
Barium	0.27	I	0.005	100
Beryllium	ND		0.001	
Boron	0.57	B1, I, V	0.01	
Cadmium	ND	B2	0.003	1
Calcium	517	I	0.30	100000
Chromium	ND	I	0.005	5
Cobalt	ND		0.01	
Copper	ND		0.01	
Iron	ND	I	0.05	40000
Lead	ND		0.005	5
Magnesium	40.0	I	0.30	100000
Manganese	ND	I	0.02	
Nickel	ND		0.005	
Potassium	2.28		1.40	100000
Selenium	0.01	B1, I, V	0.01	1
Silver	0.003		0.003	5
Sodium	1430	I	0.30	
Strontium	0.33	I	0.005	
Thallium	ND	I	0.01	
Vanadium	0.12	B1, I	0.005	
Zinc	ND		0.02	

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LABORATORY RESULTS

Name:	ALCO SPRINGS	Date Received :	09/26/14
Project/Facility Number:	0310450012	Visit Number:	
Funding Code:	LP43-401	Temperature C:	6.00
Trip ID:		Lab Sample ID:	SI41347-01
Client Sample ID:	X101	Date/Time Collected:	09/25/14 12:25
Matrix:	Soil	Collected By:	JS
Sample Type:		Sample Depth:	
		Total Depth:	

TCLP Metals by EPA Methods 1311/6010*

Method:	6010-TCLP	Prepared:	10/20/14 07:42
Units:	mg/L	Analyzed:	11/07/14 10:04

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Hardness	1460		2.00	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X102** Lab Sample ID: **SI41347-02**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:45

Sample Type: Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: SW-846 6010 Prepared: 10/09/14 07:27

Units: mg/kg dry Analyzed: 10/16/14 10:48

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	60.6		7.72	
Arsenic	ND		1.54	
Barium	3.08		0.39	
Beryllium	ND		0.08	
Boron	ND		3.86	
Cadmium	ND		0.39	
Calcium	4010		23.2	
Chromium	69.0		0.39	
Cobalt	2.13		0.77	
Copper	16.5		0.77	
Iron	29400		77.2	
Lead	13.5		0.39	
Magnesium	312		38.6	
Manganese	999		1.16	
Nickel	8.63		0.39	
Potassium	ND		154	
Silver	ND		0.39	
Sodium	ND		154	
Strontium	3.01		0.39	
Vanadium	5.83		0.39	
Zinc	23.3		3.86	
Antimony	ND		1.54	
Selenium	2.02		1.54	
Thallium	ND		1.54	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAP (accredited by Florida DOH #E37643). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received : 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X102** Lab Sample ID: **SI41347-02**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:45

Sample Type: Sample Depth: Total Depth:

TCLP Metals by EPA Methods 1311/6010*

Method: 6010-TCLP Prepared: 10/20/14 07:42

Units: mg/L Analyzed: 11/07/14 10:08

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	ND	I	0.06	40000
Antimony	ND		0.01	
Arsenic	ND		0.01	5
Barium	0.03	V	0.005	100
Beryllium	ND		0.001	
Boron	0.59	V	0.01	
Cadmium	ND		0.003	1
Calcium	21.7	I	0.30	100000
Chromium	ND		0.005	5
Cobalt	ND		0.01	
Copper	0.02		0.01	
Iron	0.41		0.05	40000
Lead	0.12		0.005	5
Magnesium	1.04		0.30	100000
Manganese	2.27		0.02	
Nickel	ND		0.005	
Potassium	ND		1.40	100000
Selenium	0.01	V	0.01	1
Silver	ND		0.003	5
Sodium	1360	I	0.30	
Strontium	0.02		0.005	
Thallium	ND		0.01	
Vanadium	ND		0.005	
Zinc	0.09		0.02	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Test results meet all requirements of NELAP (accredited by Florida DOH #E37645). If you have any questions about this report, please contact Tom Weiss, Laboratory Manager, at 217.782.9780.

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LABORATORY RESULTS

Name:	ALCO SPRINGS	Date Received :	09/26/14
Project/Facility Number:	0310450012	Visit Number:	
Funding Code:	LP43-401	Temperature C:	6.00
Trip ID:		Lab Sample ID:	SI41347-02
Client Sample ID:	X102	Date/Time Collected:	09/25/14 12:45
Matrix:	Soil	Collected By:	JS
Sample Type:		Sample Depth:	
		Total Depth:	

TCLP Metals by EPA Methods 1311/6010*

Method:	6010-TCLP	Prepared:	10/20/14 07:42
Units:	mg/L	Analyzed:	11/07/14 10:08

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Hardness	58.4		2.00	

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LABORATORY RESULTS

Name: ALCO SPRINGS

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: X103 Lab Sample ID: SI41347-03

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:53

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 09/26/14 14:20

Units: ug/kg dry Analyzed: 10/09/14 19:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.4	
Vinyl chloride	ND		2.4	
Bromomethane	ND		2.4	
Chloroethane	ND		2.4	
Trichlorofluoromethane	ND		2.4	
Acetone	ND		12	
1,1-Dichloroethene	ND		2.4	
Methylene chloride	ND		5.9	
Carbon disulfide	ND		2.4	
trans-1,2-Dichloroethene	ND		2.4	
Methyl tert-butyl ether	ND		2.4	
1,1-Dichloroethane	ND		2.4	
2-Butanone (MEK)	ND		12	
cis-1,2-Dichloroethene	ND		2.4	
Bromochloromethane	ND		2.4	
Chloroform	ND		2.4	
2,2-Dichloropropane	ND		2.4	
1,2-Dichloroethane	ND		2.4	
1,1,1-Trichloroethane	ND		2.4	
1,1-Dichloropropene	ND		2.4	
Carbon tetrachloride	ND		2.4	
Benzene	ND		2.4	
Dibromomethane	ND		2.4	
1,2-Dichloropropane	ND		2.4	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X103** Lab Sample ID: **SI41347-03**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:53

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 09/26/14 14:20

Units: ug/kg dry Analyzed: 10/09/14 19:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.4	
Bromodichloromethane	ND		2.4	
cis-1,3-Dichloropropene	ND		2.4	
4-Methyl-2-pentanone (MIBK)	ND		2.4	
trans-1,3-Dichloropropene	ND		2.4	
1,1,2-Trichloroethane	ND		2.4	
Toluene	ND		2.4	
1,3-Dichloropropane	ND		2.4	
2-Hexanone (MBK)	ND		2.4	
Dibromochloromethane	ND		2.4	
1,2-Dibromoethane	ND		2.4	
Tetrachloroethene	ND		2.4	
1,1,1,2-Tetrachloroethane	ND		2.4	
Chlorobenzene	ND		2.4	
Ethylbenzene	ND		2.4	
Bromoform	ND		2.4	
Styrene	ND		2.4	
1,1,2,2-Tetrachloroethane	ND		2.4	
Xylenes, total	ND		2.4	
1,2,3-Trichloropropane	ND		2.4	
Isopropylbenzene	ND		2.4	
Bromobenzene	ND		2.4	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received : 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X103** Lab Sample ID: **SI41347-03**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:53

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 09/30/14 09:38

Units: ug/kg dry Analyzed: 10/02/14 14:43

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Pyridine	ND		66	
2-Picoline	ND		66	
Methyl methanesulfonate	ND		66	
Ethyl methanesulfonate	ND		66	
Phenol	ND		66	
Bis(2-chloroethyl)ether	ND		66	
2-Chlorophenol	ND		66	
1,3-Dichlorobenzene	ND		66	
1,4-Dichlorobenzene	ND		66	
1,2-Dichlorobenzene	ND		66	
2-Methylphenol	ND		66	
2,2-Oxybis(1-chloropropane)	ND		66	
Acetophenone	ND		66	
4-Methylphenol	ND		66	
N-Nitrosodi-n-propylamine	ND		66	
Hexachloroethane	ND		66	
Nitrobenzene	ND		66	
N-Nitrosopiperidine	ND		66	
Isophorone	ND		66	
2-Nitrophenol	ND		66	
2,4-Dimethylphenol	ND		66	
Bis(2-chloroethoxy)methane	ND		66	
2,4-Dichlorophenol	ND		66	
1,2,4-Trichlorobenzene	ND		66	

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LABORATORY RESULTS

Name: ALCO SPRINGS

Project/Facility Number: 0310450012 Date Received : 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: X103 Lab Sample ID: SI41347-03

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:53

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 09/30/14 09:38

Units: ug/kg dry Analyzed: 10/02/14 14:43

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Naphthalene	ND		66	
4-Chloroaniline	ND	J3	66	
2,6-Dichlorophenol	ND		66	
Hexachloropropene	ND		66	
Hexachlorobutadiene	ND		66	
N-Nitrosodi-n-butylamine	ND		66	
4-Chloro-3-methylphenol	ND		66	
Isosafrole	ND		66	
2-Methylnaphthalene	ND		66	
1,2,4,5-Tetrachlorobenzene	ND		66	
Hexachlorocyclopentadiene	ND		220	
2,4,6-Trichlorophenol	ND		66	
2,4,5-Trichlorophenol	ND		66	
Safrole	ND		66	
2-Chloronaphthalene	ND		66	
1-Chloronaphthalene	ND		66	
2-Nitroaniline	ND		66	
1,4-Dinitrobenzene	ND		66	
Dimethylphthalate	ND		66	
1,3-Dinitrobenzene	ND		66	
2,6-Dinitrotoluene	ND		66	
Acenaphthylene	ND		66	
1,2-Dinitrobenzene	ND		66	
3-Nitroaniline	ND		66	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X103** Lab Sample ID: **SI41347-03**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:53

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 09/30/14 09:38

Units: ug/kg dry Analyzed: 10/02/14 14:43

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Acenaphthene	ND		66	
2,4-Dinitrophenol	ND		220	
4-Nitrophenol	ND		66	
Dibenzofuran	ND		66	
2,4-Dinitrotoluene	ND		66	
Pentachlorobenzene	ND		66	
1-Naphthylamine	ND		66	
2-Naphthylamine	ND		66	
2,3,4,6-Tetrachlorophenol	ND		66	
Diethylphthalate	ND		66	
4-Chlorophenyl phenyl ether	ND		66	
Fluorene	ND		66	
4-Nitroaniline	ND		66	
4,6-Dinitro-2-methylphenol	ND		440	
Diphenylamine	ND		66	
Azobenzene	ND		66	
Phenacetin	ND		66	
4-Bromophenyl phenyl ether	ND		66	
Hexachlorobenzene	ND		66	
Pentachlorophenol	ND		660	
Pronamide	ND		66	
Pentachloronitrobenzene	ND		66	
Phenanthrene	ND		66	
Anthracene	ND		66	

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LABORATORY RESULTS

Name: ALCO SPRINGS

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: X103 Lab Sample ID: SI41347-03

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:53

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 09/30/14 09:38

Units: ug/kg dry Analyzed: 10/02/14 14:43

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Carbazole	ND		66	
4-Nitrobiphenyl	ND		66	
Di-n-butylphthalate	ND		66	
5-Nitroacenaphthene	ND		66	
Isodrin	ND		66	
Fluoranthene	76		66	
Pyrene	ND		66	
p-Dimethylaminoazobenzene	ND		66	
Butyl benzyl phthalate	ND		66	
3,3-Dichlorobenzidine	ND		66	
Benzo(a)anthracene	ND		66	
Chrysene	ND		66	
Bis(2-ethylhexyl)phthalate	ND		220	
Mestranol	ND		66	
Di-n-octylphthalate	ND		66	
Benzo(b)fluoranthene	ND		66	
7,12-Dimethylbenzo(a)anthracene	ND		66	
Benzo(k)fluoranthene	ND		66	
Benzo(a)pyrene	ND		66	
Indeno(1,2,3-cd)pyrene	ND		66	
Dibenzo(a,h)anthracene	ND		66	
Benzo(ghi)perylene	ND		66	

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LABORATORY RESULTS

Name: ALCO SPRINGS
Project/Facility Number: 0310450012 Date Received: 09/26/14
Funding Code: LP43-401 Visit Number:
Trip ID: Temperature C: 6.00
Client Sample ID: X103 Lab Sample ID: SI41347-03
Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 12:53
Sample Type: Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: SW-846 6010 Prepared: 10/09/14 07:27
Units: mg/kg dry Analyzed: 10/16/14 10:52

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	13100		12.5	
Arsenic	9.02		2.49	
Barium	48.0		0.62	
Beryllium	0.17		0.12	
Boron	15.5		6.23	
Cadmium	ND		0.62	
Calcium	40400		37.4	
Chromium	45.0		0.62	
Cobalt	13.7		1.25	
Copper	32.4		1.25	
Iron	27300		125	
Lead	22.2		0.62	
Magnesium	15000		62.3	
Manganese	1470		1.87	
Nickel	33.6		0.62	
Potassium	2830		249	
Silver	ND		0.62	
Sodium	ND		249	
Strontium	47.2		0.62	
Vanadium	28.8		0.62	
Zinc	64.8		6.23	
Antimony	ND		2.49	
Selenium	ND		2.49	
Thallium	ND		2.49	

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LABORATORY RESULTS

Name: ALCO SPRINGS

Project/Facility Number: 0310450012

Date Received : 09/26/14

Funding Code: LP43-401

Visit Number:

Trip ID:

Temperature C: 6.00

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received : 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X104** Lab Sample ID: **SI41347-04**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:09

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 09/26/14 14:20

Units: ug/kg dry Analyzed: 10/09/14 20:17

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.3	
Vinyl chloride	ND		2.3	
Bromomethane	ND		2.3	
Chloroethane	ND		2.3	
Trichlorofluoromethane	ND		2.3	
Acetone	14		12	
1,1-Dichloroethene	ND		2.3	
Methylene chloride	ND		5.8	
Carbon disulfide	ND		2.3	
trans-1,2-Dichloroethene	ND		2.3	
Methyl tert-butyl ether	ND		2.3	
1,1-Dichloroethane	ND		2.3	
2-Butanone (MEK)	ND		12	
cis-1,2-Dichloroethene	ND		2.3	
Bromochloromethane	ND		2.3	
Chloroform	ND		2.3	
2,2-Dichloropropane	ND		2.3	
1,2-Dichloroethane	ND		2.3	
1,1,1-Trichloroethane	ND		2.3	
1,1-Dichloropropene	ND		2.3	
Carbon tetrachloride	ND		2.3	
Benzene	ND		2.3	
Dibromomethane	ND		2.3	
1,2-Dichloropropane	ND		2.3	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X104** Lab Sample ID: **SI41347-04**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:09

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 09/26/14 14:20

Units: ug/kg dry Analyzed: 10/09/14 20:17

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.3	
Bromodichloromethane	ND		2.3	
cis-1,3-Dichloropropene	ND		2.3	
4-Methyl-2-pentanone (MIBK)	ND		2.3	
trans-1,3-Dichloropropene	ND		2.3	
1,1,2-Trichloroethane	ND		2.3	
Toluene	ND		2.3	
1,3-Dichloropropane	ND		2.3	
2-Hexanone (MBK)	ND		2.3	
Dibromochloromethane	ND		2.3	
1,2-Dibromoethane	ND		2.3	
Tetrachloroethene	ND		2.3	
1,1,1,2-Tetrachloroethane	ND		2.3	
Chlorobenzene	ND		2.3	
Ethylbenzene	ND		2.3	
Bromoform	ND		2.3	
Styrene	ND		2.3	
1,1,2,2-Tetrachloroethane	ND		2.3	
Xylenes, total	ND		2.3	
1,2,3-Trichloropropane	ND		2.3	
Isopropylbenzene	ND		2.3	
Bromobenzene	ND		2.3	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X104** Lab Sample ID: **SI41347-04**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:09

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 09/30/14 09:38

Units: ug/kg dry Analyzed: 10/02/14 15:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Pyridine	ND		130	
2-Picoline	ND		130	
Methyl methanesulfonate	ND		130	
Ethyl methanesulfonate	ND		130	
Phenol	ND		130	
Bis(2-chloroethyl)ether	ND		130	
2-Chlorophenol	ND		130	
1,3-Dichlorobenzene	ND		130	
1,4-Dichlorobenzene	ND		130	
1,2-Dichlorobenzene	ND		130	
2-Methylphenol	ND		130	
2,2-Oxybis(1-chloropropane)	ND		130	
Acetophenone	ND		130	
4-Methylphenol	ND		130	
N-Nitrosodi-n-propylamine	ND		130	
Hexachloroethane	ND		130	
Nitrobenzene	ND		130	
N-Nitrosopiperidine	ND		130	
Isophorone	ND		130	
2-Nitrophenol	ND		130	
2,4-Dimethylphenol	ND		130	
Bis(2-chloroethoxy)methane	ND		130	
2,4-Dichlorophenol	ND		130	
1,2,4-Trichlorobenzene	ND		130	

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LABORATORY RESULTS

Name: ALCO SPRINGS
Project/Facility Number: 0310450012 Date Received: 09/26/14
Funding Code: LP43-401 Visit Number:
Trip ID: Temperature C: 6.00
Client Sample ID: X104 Lab Sample ID: SI41347-04
Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:09
Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 09/30/14 09:38
Units: ug/kg dry Analyzed: 10/02/14 15:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Naphthalene	ND		130	
4-Chloroaniline	ND		130	
2,6-Dichlorophenol	ND		130	
Hexachloropropene	ND		130	
Hexachlorobutadiene	ND		130	
N-Nitrosodi-n-butylamine	ND		130	
4-Chloro-3-methylphenol	ND		130	
Isosafrole	ND		130	
2-Methylnaphthalene	ND		130	
1,2,4,5-Tetrachlorobenzene	ND		130	
Hexachlorocyclopentadiene	ND		440	
2,4,6-Trichlorophenol	ND		130	
2,4,5-Trichlorophenol	ND		130	
Safrole	ND		130	
2-Chloronaphthalene	ND		130	
1-Chloronaphthalene	ND		130	
2-Nitroaniline	ND		130	
1,4-Dinitrobenzene	ND		130	
Dimethylphthalate	ND		130	
1,3-Dinitrobenzene	ND		130	
2,6-Dinitrotoluene	ND		130	
Acenaphthylene	ND		130	
1,2-Dinitrobenzene	ND		130	
3-Nitroaniline	ND		130	

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LABORATORY RESULTS

Name: ALCO SPRINGS
Project/Facility Number: 0310450012 Date Received: 09/26/14
Funding Code: LP43-401 Visit Number:
Trip ID: Temperature C: 6.00
Client Sample ID: X104 Lab Sample ID: SI41347-04
Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:09
Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 09/30/14 09:38
Units: ug/kg dry Analyzed: 10/02/14 15:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Acenaphthene	ND		130	
2,4-Dinitrophenol	ND		440	
4-Nitrophenol	ND		130	
Dibenzofuran	ND		130	
2,4-Dinitrotoluene	ND		130	
Pentachlorobenzene	ND		130	
1-Naphthylamine	ND		130	
2-Naphthylamine	ND		130	
2,3,4,6-Tetrachlorophenol	ND		130	
Diethylphthalate	ND		130	
4-Chlorophenyl phenyl ether	ND		130	
Fluorene	ND		130	
4-Nitroaniline	ND		130	
4,6-Dinitro-2-methylphenol	ND		850	
Diphenylamine	ND		130	
Azobenzene	ND		130	
Phenacetin	ND		130	
4-Bromophenyl phenyl ether	ND		130	
Hexachlorobenzene	ND		130	
Pentachlorophenol	ND		1300	
Pronamide	ND		130	
Pentachloronitrobenzene	ND		130	
Phenanthrene	1200		130	
Anthracene	ND		130	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X104** Lab Sample ID: **SI41347-04**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:09

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 09/30/14 09:38

Units: ug/kg dry Analyzed: 10/02/14 15:44

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Carbazole	ND		130	
4-Nitrobiphenyl	ND		130	
Di-n-butylphthalate	ND		130	
5-Nitroacenaphthene	ND		130	
Isodrin	ND		130	
Fluoranthene	1800		130	
Pyrene	1100		130	
p-Dimethylaminoazobenzene	ND		130	
Butyl benzyl phthalate	ND		130	
3,3-Dichlorobenzidine	ND		130	
Benzo(a)anthracene	560		130	
Chrysene	600		130	
Bis(2-ethylhexyl)phthalate	ND		440	
Mestranol	ND		130	
Di-n-octylphthalate	ND		130	
Benzo(b)fluoranthene	440		130	
7,12-Dimethylbenzo(a)anthracene	ND		130	
Benzo(k)fluoranthene	550		130	
Benzo(a)pyrene	400		130	
Indeno(1,2,3-cd)pyrene	280		130	
Dibenzo(a,h)anthracene	ND		130	
Benzo(ghi)perylene	350		130	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X104** Lab Sample ID: **SI41347-04**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:09

Sample Type: Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: SW-846 6010 Prepared: 10/09/14 07:27

Units: mg/kg dry Analyzed: 10/16/14 10:56

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	10300		11.1	
Arsenic	5.14		2.22	
Barium	43.5		0.56	
Beryllium	0.26		0.11	
Boron	15.2		5.56	
Cadmium	ND		0.56	
Calcium	24700		33.4	
Chromium	21.0		0.56	
Cobalt	10.7		1.11	
Copper	36.7		1.11	
Iron	19800		111	
Lead	36.7		0.56	
Magnesium	11800		55.6	
Manganese	419		1.67	
Nickel	24.1		0.56	
Potassium	1900		222	
Silver	ND		0.56	
Sodium	ND		222	
Strontium	25.9		0.56	
Vanadium	19.1		0.56	
Zinc	83.7		5.56	
Antimony	ND		2.22	
Selenium	ND		2.22	
Thallium	ND		2.22	

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LABORATORY RESULTS

Name: ALCO SPRINGS

Project/Facility Number: 0310450012

Date Received : 09/26/14

Funding Code: LP43-401

Visit Number:

Trip ID:

Temperature C: 6.00

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received : 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X105** Lab Sample ID: **SI41347-05**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:23

Sample Type: Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: SW-846 6010 Prepared: 10/09/14 07:27

Units: mg/kg dry Analyzed: 10/16/14 10:59

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	3620		8.50	
Arsenic	ND		1.70	
Barium	70.3		0.42	
Beryllium	ND		0.08	
Boron	55.5		4.25	
Cadmium	ND		0.42	
Calcium	238000		25.5	
Chromium	494		0.42	
Cobalt	2.58		0.85	
Copper	17.4		0.85	
Iron	38700		85.0	
Lead	5.76		0.42	
Magnesium	30800		42.5	
Manganese	59700		1.27	
Nickel	5.67		0.42	
Potassium	960		170	
Silver	8.28		0.42	
Sodium	224		170	
Strontium	124		0.42	
Vanadium	582		0.42	
Zinc	4.28		4.25	
Antimony	4.46		1.70	
Selenium	25.1		1.70	
Thallium	16.9		1.70	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: . Temperature C: 6.00

Client Sample ID: **X105** Lab Sample ID: **SI41347-05**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:23

Sample Type: Sample Depth: Total Depth:

TCLP Metals by EPA Methods 1311/6010*

Method: 6010-TCLP Prepared: 10/20/14 07:42

Units: mg/L Analyzed: 11/07/14 10:12

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	ND	I	0.06	40000
Antimony	ND		0.01	
Arsenic	ND		0.01	5
Barium	0.05		0.005	100
Beryllium	ND		0.001	
Boron	0.62	B1, V	0.01	
Cadmium	ND	B2	0.003	1
Calcium	608	I	0.30	100000
Chromium	ND		0.005	5
Cobalt	ND		0.01	
Copper	ND		0.01	
Iron	ND		0.05	40000
Lead	ND		0.005	5
Magnesium	9.34		0.30	100000
Manganese	ND		0.02	
Nickel	ND		0.005	
Potassium	3.11		1.40	100000
Selenium	0.02	B1, V	0.01	1
Silver	0.003		0.003	5
Sodium	1450	I	0.30	
Strontium	0.37		0.005	
Thallium	ND		0.01	
Vanadium	0.72	B1	0.005	
Zinc	ND		0.02	

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LABORATORY RESULTS

Name:	ALCO SPRINGS	Date Received :	09/26/14
Project/Facility Number:	0310450012	Visit Number:	
Funding Code:	LP43-401	Temperature C:	6.00
Trip ID:		Lab Sample ID:	SI41347-05
Client Sample ID:	X105	Date/Time Collected:	09/25/14 13:23
Matrix:	Soil	Collected By:	JS
Sample Type:		Sample Depth:	
		Total Depth:	

TCLP Metals by EPA Methods 1311/6010*

Method:	6010-TCLP	Prepared:	10/20/14 07:42
Units:	mg/L	Analyzed:	11/07/14 10:12

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Hardness	1500		2.00	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received : 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X106** Lab Sample ID: **SI41347-06**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:30

Sample Type: Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: SW-846 6010 Prepared: 10/09/14 07:27

Units: mg/kg dry Analyzed: 10/16/14 11:02

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	12300		8.61	
Arsenic	2.34		1.72	
Barium	67.6		0.43	
Beryllium	ND		0.09	
Boron	32.2		4.30	
Cadmium	ND		0.43	
Calcium	149000		25.8	
Chromium	1590		0.43	
Cobalt	9.31		0.86	
Copper	70.8		0.86	
Iron	172000		86.1	
Lead	32.2		0.43	
Magnesium	29600		43.0	
Manganese	33100		1.29	
Nickel	33.1		0.43	
Potassium	887		172	
Silver	4.98		0.43	
Sodium	ND		172	
Strontium	94.2		0.43	
Vanadium	327		0.43	
Zinc	29.5		4.30	
Antimony	13.0		1.72	
Selenium	26.6		1.72	
Thallium	6.90		1.72	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X106** Lab Sample ID: **SI41347-06**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:30

Sample Type: Sample Depth: Total Depth:

TCLP Metals by EPA Methods 1311/6010*

Method: 6010-TCLP Prepared: 10/20/14 07:42

Units: mg/L Analyzed: 11/07/14 10:16

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	ND	I	0.06	40000
Antimony	ND		0.01	
Arsenic	ND		0.01	5
Barium	0.47		0.005	100
Beryllium	ND		0.001	
Boron	0.68	B1, V	0.01	
Cadmium	ND	B2	0.003	1
Calcium	735	I	0.30	100000
Chromium	ND		0.005	5
Cobalt	ND		0.01	
Copper	ND		0.01	
Iron	ND		0.05	40000
Lead	ND		0.005	5
Magnesium	50.7		0.30	100000
Manganese	19.9		0.02	
Nickel	0.008		0.005	
Potassium	6.10		1.40	100000
Selenium	0.03	B1, V	0.01	1
Silver	0.004		0.003	5
Sodium	1440	I	0.30	
Strontium	0.51		0.005	
Thallium	ND		0.01	
Vanadium	0.11	B1	0.005	
Zinc	ND		0.02	

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LABORATORY RESULTS

Name:	ALCO SPRINGS	Date Received :	09/26/14
Project/Facility Number:	0310450012	Visit Number:	
Funding Code:	LP43-401	Temperature C:	6.00
Trip ID:		Lab Sample ID:	SI41347-06
Client Sample ID:	X106	Date/Time Collected:	09/25/14 13:30
Matrix:	Soil	Collected By:	JS
Sample Type:		Sample Depth:	
		Total Depth:	

TCLP Metals by EPA Methods 1311/6010*

Method:	6010-TCLP	Prepared:	10/20/14 07:42
Units:	mg/L	Analyzed:	11/07/14 10:16

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Hardness	1960		2.00	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X107** Lab Sample ID: **SI41347-07**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:45

Sample Type: Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: SW-846 6010 Prepared: 10/09/14 07:27

Units: mg/kg dry Analyzed: 10/16/14 11:12

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	1480		7.85	
Arsenic	ND		1.57	
Barium	96.0		0.39	
Beryllium	ND		0.08	
Boron	74.5		3.93	
Cadmium	ND		0.39	
Calcium	208000		23.6	
Chromium	778		0.39	
Cobalt	1.93		0.79	
Copper	14.2		0.79	
Iron	42000		78.5	
Lead	7.12		0.39	
Magnesium	55300		39.3	
Manganese	92400		1.18	
Nickel	1.36		0.39	
Potassium	919		157	
Silver	13.0		0.39	
Sodium	223		157	
Strontium	130		0.39	
Vanadium	209		0.39	
Zinc	5.51		3.93	
Antimony	5.87		1.57	
Selenium	33.1		1.57	
Thallium	25.9		1.57	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received : 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **X107** Lab Sample ID: **SI41347-07**

Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 13:45

Sample Type: Sample Depth: Total Depth:

TCLP Metals by EPA Methods 1311/6010*

Method: 6010-TCLP Prepared: 10/20/14 07:42

Units: mg/L Analyzed: 11/07/14 10:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	ND	I	0.06	40000
Antimony	ND		0.01	
Arsenic	ND		0.01	5
Barium	0.09		0.005	100
Beryllium	ND		0.001	
Boron	0.53	B1, V	0.01	
Cadmium	ND	B2	0.003	1
Calcium	415	I	0.30	100000
Chromium	ND		0.005	5
Cobalt	ND		0.01	
Copper	0.01		0.01	
Iron	ND		0.05	40000
Lead	ND		0.005	5
Magnesium	95.2		0.30	100000
Manganese	ND		0.02	
Nickel	ND		0.005	
Potassium	3.00		1.40	100000
Selenium	0.02	B1, V	0.01	1
Silver	ND		0.003	5
Sodium	1410	I	0.30	
Strontium	0.32		0.005	
Thallium	ND		0.01	
Vanadium	0.12	B1	0.005	
Zinc	ND		0.02	

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LABORATORY RESULTS

Name:	ALCO SPRINGS		
Project/Facility Number:	0310450012	Date Received :	09/26/14
Funding Code:	LP43-401	Visit Number:	
Trip ID:		Temperature C:	6.00
Client Sample ID:	X107	Lab Sample ID:	SI41347-07
Matrix:	Soil	Collected By:	JS
		Date/Time Collected:	09/25/14 13:45
Sample Type:		Sample Depth:	
		Total Depth:	

TCLP Metals by EPA Methods 1311/6010*

Method:	6010-TCLP	Prepared:	10/20/14 07:42
Units:	mg/L	Analyzed:	11/07/14 10:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Hardness	1430		2.00	

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LABORATORY RESULTS

Name: ALCO SPRINGS
Project/Facility Number: 0310450012 Date Received: 09/26/14
Funding Code: LP43-401 Visit Number:
Trip ID: Temperature C: 6.00
Client Sample ID: X108 Lab Sample ID: SI41347-08
Matrix: Soil Collected By: JS Date/Time Collected: 09/25/14 14:00
Sample Type: Sample Depth: Total Depth:

Metals by EPA Method 6010 - ICP

Method: SW-846 6010 Prepared: 10/09/14 07:27
Units: mg/kg dry Analyzed: 10/16/14 11:16

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Aluminum	19400		11.4	
Arsenic	2.88		2.27	
Barium	154		0.57	
Beryllium	0.93		0.11	
Boron	81.6		5.68	
Cadmium	ND		0.57	
Calcium	30400		34.1	
Chromium	26.8		0.57	
Cobalt	14.6		1.14	
Copper	24.9		1.14	
Iron	26800		114	
Lead	20.1		0.57	
Magnesium	17600		56.8	
Manganese	520		1.71	
Nickel	99.8		0.57	
Potassium	2050		227	
Silver	ND		0.57	
Sodium	1080		227	
Strontium	79.5		0.57	
Vanadium	28.5		0.57	
Zinc	84.1		5.68	
Antimony	ND		2.27	
Selenium	2.54		2.27	
Thallium	ND		2.27	

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LABORATORY RESULTS

Name: ALCO SPRINGS

Project/Facility Number: 0310450012

Date Received : 09/26/14

Funding Code: LP43-401

Visit Number:

Trip ID:

Temperature C: 6.00

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **TRIP BLANKS** Lab Sample ID: **SI41347-09**

Matrix: Water Collected By: Date/Time Collected: 09/25/14 0:00

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 10/07/14 11:00

Units: ug/L Analyzed: 10/07/14 18:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND		2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

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Illinois Environmental Protection Agency Laboratory

825 N. Rutledge Springfield, Illinois 62702 217.782.9780

LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 09/26/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 6.00

Client Sample ID: **TRIP BLANKS** Lab Sample ID: **SI41347-09**

Matrix: Water Collected By: Date/Time Collected: 09/25/14 0:00

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 10/07/14 11:00

Units: ug/L Analyzed: 10/07/14 18:20

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,2,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

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LABORATORY RESULTS

Name:	ALCO SPRINGS		
Project/Facility Number:	0310450012	Date Received :	09/26/14
Funding Code:	LP43-401	Visit Number:	
Trip ID:		Temperature C:	6.00

Notes and Definitions

- V Indicates the analyte was detected in both the sample and the associated method blank and was outside method blank acceptance criteria.
- J3 The reported value failed to meet the established quality control criteria for either precision or accuracy possibly due to matrix effects.
- I See Case Narrative for more information.
- B2 The sample matrix caused possible effects on measurement. The result may be biased high.
- B1 The sample matrix caused possible effects on measurement. The result may be biased low.
- ND Analyte NOT DETECTED at or above the reporting limit
- * Non-NELAP accredited

Method 8270: Tentatively Identified Compounds (TICs) were detected in the volatile and semi-volatile analyses of the samples SI41347-03 and -04. Please contact the laboratory if additional information about the TICs is needed.

Metals ICP24: SI41347-01 Client Matrix Assessment- sample failed Method dilution for Calcium, Iron, Magnesium, Barium, Boron, Chromium, Manganese, Strontium, Vanadium, Selenium and Thallium; and the post spike failed for Arsenic, Beryllium, Cadmium, Nickel, Silver, Zinc, Selenium, and Thallium indicating probable matrix interference.

Metals TCLP 24: SI41347-01 Client Matrix Assessment- sample failed post spike test for Aluminum, indicating probable matrix interference.

Metals TCLP 24: SI41347-01, -02, -05, -06, -07 - Blank extraction fluid used for TCLP extraction contains 1,373 mg/L Sodium. Results of Boron 609 ug/L, Calcium 837 ug/L, and Aluminum 209 ug/L were also found in the extraction fluid. They are not normally reported for TCLP analysis and therefore the method may not be optimized for the reporting of these analytes. The blank extraction fluid also shows a negative bias for Arsenic.

Report Authorized by:

Matthew C. Neely
Organic Analysis Unit Supervisor

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LABORATORY RESULTS

Name: ALCO SPRINGS
Project/Facility Number: 0310450012 Date Received: 10/01/14
Funding Code: LP43-401 Visit Number:
Trip ID: Temperature C: 9.00
Client Sample ID: S301 Lab Sample ID: SJ40037-01
Matrix: Water Collected By: GB Date/Time Collected: 09/30/14 11:00
Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 10/07/14 11:00
Units: ug/L Analyzed: 10/08/14 00:09

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND	J3	2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 10/01/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 9.00

Client Sample ID: **S301** Lab Sample ID: **SJ40037-01**

Matrix: Water Collected By: GB Date/Time Collected: 09/30/14 11:00

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 10/07/14 11:00

Units: ug/L Analyzed: 10/08/14 00:09

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,2,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 10/01/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 9.00

Client Sample ID: **S301** Lab Sample ID: **SJ40037-01**

Matrix: Water Collected By: GB Date/Time Collected: 09/30/14 11:00

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 10/02/14 08:10

Units: ug/L Analyzed: 10/06/14 18:50

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Pyridine	ND		1.5	
2-Picoline	ND		1.5	
Methyl methanesulfonate	ND		1.5	
Ethyl methanesulfonate	ND		1.5	
Phenol	ND		1.5	
Bis(2-chloroethyl)ether	ND		1.5	
2-Chlorophenol	ND		1.5	
1,3-Dichlorobenzene	ND		1.5	
1,4-Dichlorobenzene	ND		1.5	
1,2-Dichlorobenzene	ND		1.5	
2-Methylphenol	ND		1.5	
2,2-Oxybis(1-chloropropane)	ND		1.5	
Acetophenone	ND		1.5	
4-Methylphenol	ND		1.5	
N-Nitrosodi-n-propylamine	ND		1.5	
Hexachloroethane	ND		1.5	
Nitrobenzene	ND		1.5	
N-Nitrosopiperidine	ND		1.5	
Isophorone	ND		1.5	
2-Nitrophenol	ND		1.5	
2,4-Dimethylphenol	ND		1.5	
Bis(2-chloroethoxy)methane	ND		1.5	
2,4-Dichlorophenol	ND		1.5	
1,2,4-Trichlorobenzene	ND		1.5	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 10/01/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 9.00

Client Sample ID: **S301** Lab Sample ID: **SJ40037-01**

Matrix: Water Collected By: GB Date/Time Collected: 09/30/14 11:00

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 10/02/14 08:10

Units: ug/L Analyzed: 10/06/14 18:50

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Naphthalene	ND		1.5	
4-Chloroaniline	ND		1.5	
2,6-Dichlorophenol	ND		1.5	
Hexachloropropene	ND		1.5	
Hexachlorobutadiene	ND		1.5	
N-Nitrosodi-n-butylamine	ND		1.5	
4-Chloro-3-methylphenol	ND		1.5	
Isosafrole	ND		1.5	
2-Methylnaphthalene	ND		1.5	
1,2,4,5-Tetrachlorobenzene	ND	J1	1.5	
Hexachlorocyclopentadiene	ND	J1	1.5	
2,4,6-Trichlorophenol	ND	J1	1.5	
2,4,5-Trichlorophenol	ND	J1	1.5	
Safrole	ND	J1	1.5	
2-Chloronaphthalene	ND	J1	1.5	
1-Chloronaphthalene	ND	J1	1.5	
2-Nitroaniline	ND	J1	1.5	
1,4-Dinitrobenzene	ND	J1	1.5	
Dimethylphthalate	ND	J1	1.5	
1,3-Dinitrobenzene	ND	J1	1.5	
2,6-Dinitrotoluene	ND	J1	1.5	
Acenaphthylene	ND	J1	1.5	
1,2-Dinitrobenzene	ND	J1	1.5	
3-Nitroaniline	ND	J1	1.5	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 10/01/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 9.00

Client Sample ID: **S301** Lab Sample ID: **SJ40037-01**

Matrix: Water Collected By: GB Date/Time Collected: 09/30/14 11:00

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 10/02/14 08:10

Units: ug/L Analyzed: 10/06/14 18:50

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Acenaphthene	ND	J1	1.5	
2,4-Dinitrophenol	ND	J1	5.0	
4-Nitrophenol	ND	J1	1.5	
Dibenzofuran	ND	J1	1.5	
2,4-Dinitrotoluene	ND	J1	1.5	
Pentachlorobenzene	ND	J1	1.5	
1-Naphthylamine	ND	J1	1.5	
2-Naphthylamine	ND	J1	1.5	
2,3,4,6-Tetrachlorophenol	ND	J1	1.5	
Diethylphthalate	ND	J1	1.5	
4-Chlorophenyl phenyl ether	ND	J1	1.5	
Fluorene	ND	J1	1.5	
4-Nitroaniline	ND	J1	1.5	
4,6-Dinitro-2-methylphenol	ND		1.5	
Diphenylamine	ND		1.5	
Azobenzene	ND		1.5	
Phenacetin	ND		1.5	
4-Bromophenyl phenyl ether	ND		1.5	
Hexachlorobenzene	ND		1.5	
Pentachlorophenol	ND		1.5	
Pronamide	ND		1.5	
Pentachloronitrobenzene	ND		1.5	
Phenanthrene	ND		1.5	
Anthracene	ND		1.5	

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LABORATORY RESULTS

Name: **ALCO SPRINGS**

Project/Facility Number: 0310450012 Date Received: 10/01/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 9.00

Client Sample ID: **S301** Lab Sample ID: **SJ40037-01**

Matrix: Water Collected By: GB Date/Time Collected: 09/30/14 11:00

Sample Type: Sample Depth: Total Depth:

Semivolatiles by GC/MS

Method: 8270 Prepared: 10/02/14 08:10

Units: ug/L Analyzed: 10/06/14 18:50

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Carbazole	ND		1.5	
4-Nitrobiphenyl	ND		1.5	
Di-n-butylphthalate	ND		1.5	
5-Nitroacenaphthene	ND		1.5	
Isodrin	ND		1.5	
Fluoranthene	ND		1.5	
Pyrene	ND		1.5	
p-Dimethylaminoazobenzene	ND		1.5	
Butyl benzyl phthalate	ND		1.5	
3,3-Dichlorobenzidine	ND	J3	1.5	
Benzo(a)anthracene	ND		1.5	
Chrysene	ND		1.5	
Bis(2-ethylhexyl)phthalate	ND		1.5	
Mestranol	ND		1.5	
Di-n-octylphthalate	ND		1.5	
Benzo(b)fluoranthene	ND		1.5	
7,12-Dimethylbenzo(a)anthracene	ND		1.5	
Benzo(k)fluoranthene	ND		1.5	
Benzo(a)pyrene	ND		1.5	
Indeno(1,2,3-cd)pyrene	ND		1.5	
Dibenzo(a,h)anthracene	ND		1.5	
Benzo(ghi)perylene	ND		1.5	

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LABORATORY RESULTS

Name: ALCO SPRINGS

Project/Facility Number: 0310450012 Date Received: 10/01/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 9.00

Client Sample ID: VOC TRIP BLANK Lab Sample ID: SJ40037-02

Matrix: Water Collected By: N/A Date/Time Collected: 09/30/14 11:00

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 10/07/14 11:00

Units: ug/L Analyzed: 10/07/14 23:34

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Chloromethane	ND		2.0	
Vinyl chloride	ND		2.0	
Bromomethane	ND		2.0	
Chloroethane	ND		2.0	
Trichlorofluoromethane	ND		2.0	
Acetone	ND		10	
1,1-Dichloroethene	ND		2.0	
Methylene chloride	ND		5.0	
Carbon disulfide	ND		2.0	
trans-1,2-Dichloroethene	ND		2.0	
Methyl tert-butyl ether	ND		2.0	
1,1-Dichloroethane	ND		2.0	
2-Butanone (MEK)	ND		10	
cis-1,2-Dichloroethene	ND		2.0	
Bromochloromethane	ND		2.0	
Chloroform	ND		2.0	
2,2-Dichloropropane	ND		2.0	
1,2-Dichloroethane	ND		2.0	
1,1,1-Trichloroethane	ND		2.0	
1,1-Dichloropropene	ND		2.0	
Carbon tetrachloride	ND		2.0	
Benzene	ND		2.0	
Dibromomethane	ND		2.0	
1,2-Dichloropropane	ND		2.0	

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LABORATORY RESULTS

Name: ALCO SPRINGS

Project/Facility Number: 0310450012 Date Received: 10/01/14

Funding Code: LP43-401 Visit Number:

Trip ID: Temperature C: 9.00

Client Sample ID: VOC TRIP BLANK Lab Sample ID: SJ40037-02

Matrix: Water Collected By: N/A Date/Time Collected: 09/30/14 11:00

Sample Type: Sample Depth: Total Depth:

Volatiles Organic Compounds by Purge and Trap GC/MS

Method: 8260 Prepared: 10/07/14 11:00

Units: ug/L Analyzed: 10/07/14 23:34

<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>Reporting Limit</u>	<u>Regulatory Level</u>
Trichloroethene	ND		2.0	
Bromodichloromethane	ND		2.0	
cis-1,3-Dichloropropene	ND		2.0	
4-Methyl-2-pentanone (MIBK)	ND		2.0	
trans-1,3-Dichloropropene	ND		2.0	
1,1,2-Trichloroethane	ND		2.0	
Toluene	ND		2.0	
1,3-Dichloropropane	ND		2.0	
2-Hexanone (MBK)	ND		2.0	
Dibromochloromethane	ND		2.0	
1,2-Dibromoethane	ND		2.0	
Tetrachloroethene	ND		2.0	
1,1,1,2-Tetrachloroethane	ND		2.0	
Chlorobenzene	ND		2.0	
Ethylbenzene	ND		2.0	
Bromoform	ND		2.0	
Styrene	ND		2.0	
1,1,2,2-Tetrachloroethane	ND		2.0	
Xylenes, total	ND		2.0	
1,2,3-Trichloropropane	ND		2.0	
Isopropylbenzene	ND		2.0	
Bromobenzene	ND		2.0	

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LABORATORY RESULTS

Name:	ALCO SPRINGS		
Project/Facility Number:	0310450012	Date Received :	10/01/14
Funding Code:	LP43-401	Visit Number:	
Trip ID:		Temperature C:	9.00

Notes and Definitions

J3 The reported value failed to meet the established quality control criteria for either precision or accuracy possibly due to matrix effects.

J1 Surrogate compound recovery limits have not been met.

ND Analyte NOT DETECTED at or above the reporting limit

* Non-NELAP accredited

Method 8270: Tentatively Identified Compounds (TICs) were detected in the semi-volatile analysis of the sample SJ40037-01. Please contact the laboratory if additional information about the TICs is needed.

Report Authorized by:

Matthew C. Neely
Organic Analysis Unit Supervisor

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